LOMBARDIC ARCHITECTURE

ITS ORIGIN, DEVELOPMENT AND DERIVATIVES

By G. T. RIVOIRA

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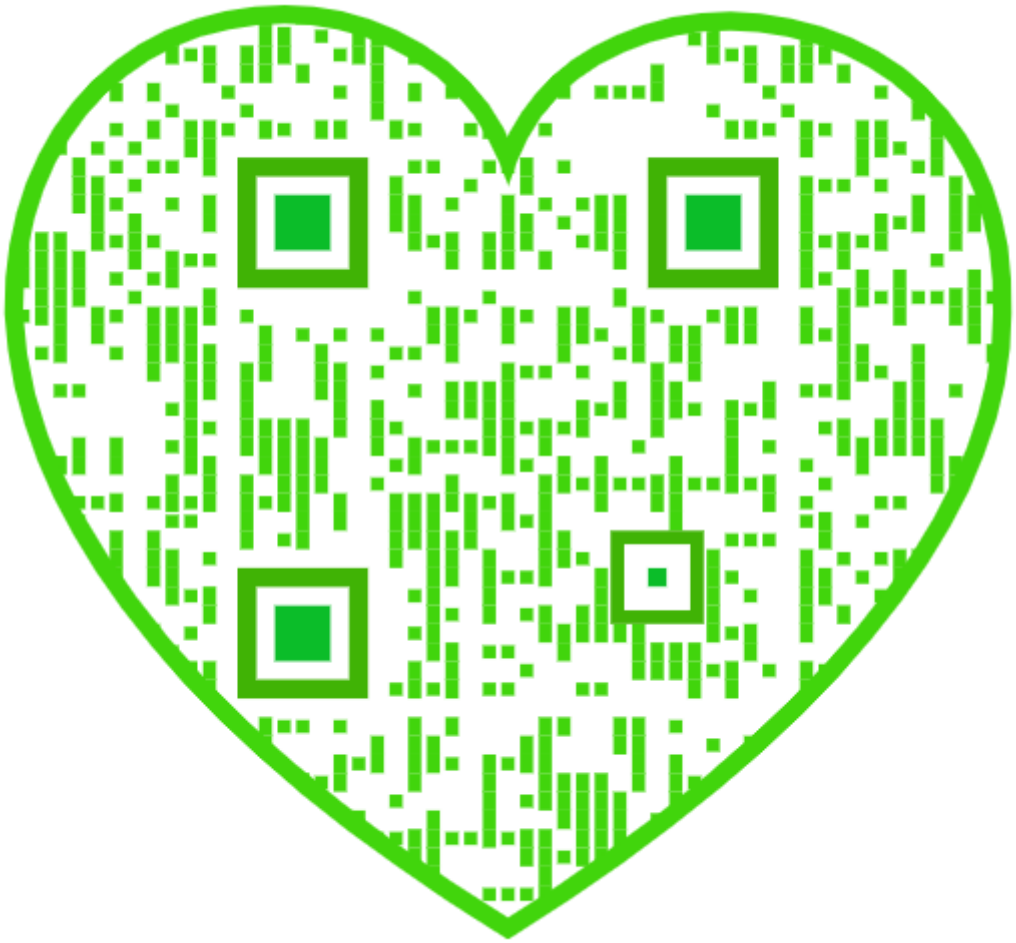

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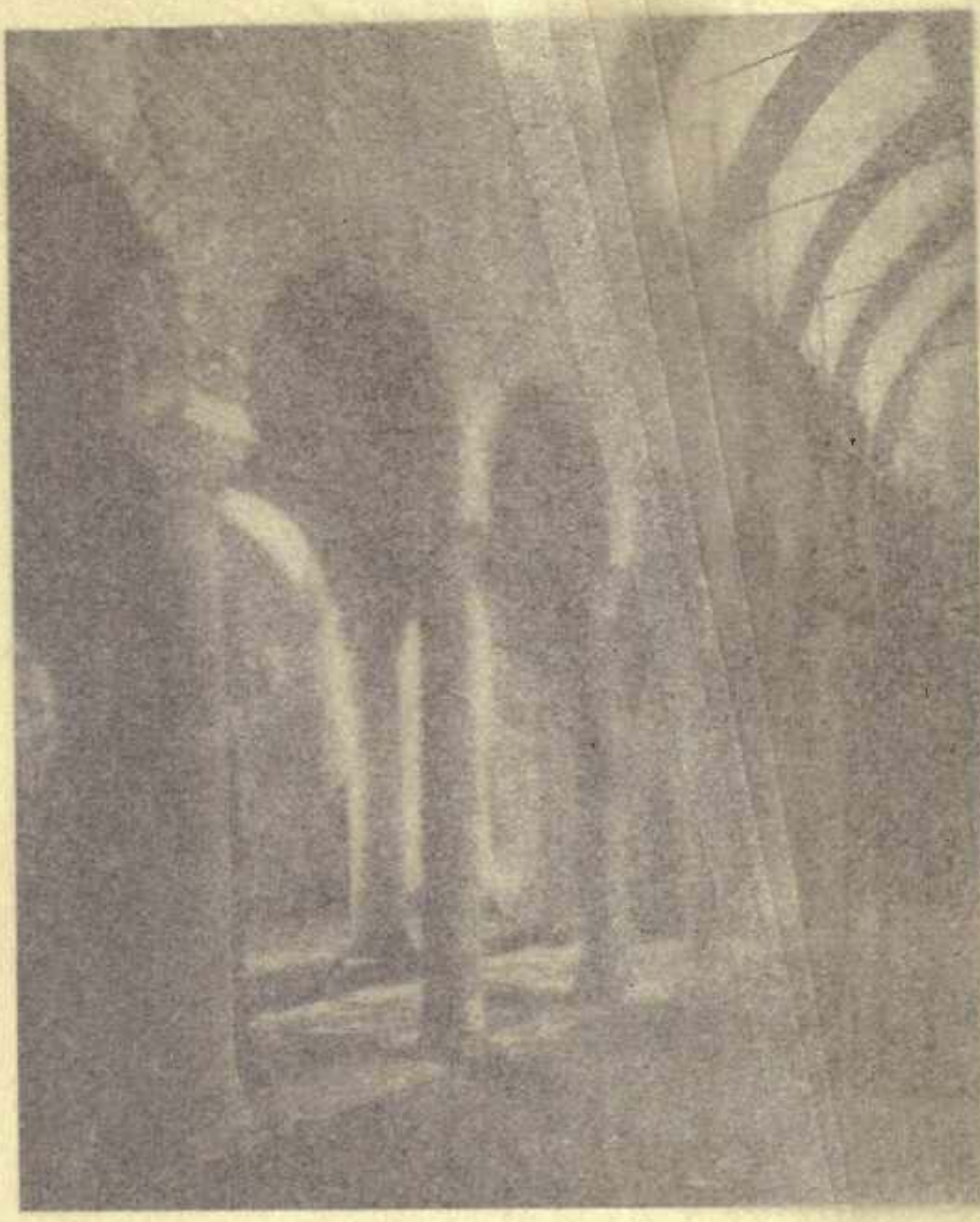

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PREFACE

It was in the course of one of my numerous artistic pilgrimages in the countries north of the Alps that there came to me like a flash the vision of what I call the real origins of the styles of architecture which flourished in those lands in the XIth and XIIth centuries. Far from being intimidated by the importance or difficulty of the subject, I forthwith determined to devote my studies and researches to the development and completion of the idea. I set to work without delay, making it my object to follow the path of truth, which was my only guide, so far as it was revealed to me by those same studies and researches. And now at last I find myself in a position to lay before the world of students the results of a labour which can be truly described as conscientious.

The book is divided into two parts. The first deals with the origins of the Lombardic vaulted basilica—the main stem from which were derived the shoots whence sprang the Northern styles above referred to. The second part is concerned with the origins of the chief derivatives of the Lombardic basilica in the lands beyond the Alps.

The work is based on investigations which are absolutely original; and not less original are the conclusions to which they give rise. Some of these conclusions, I mean those relating to the origins and modifications of the Byzantine vaulted basilica, though not immediately connected with my subject, will have the effect of opening up a wider and more rational field of research for the ecclesiastical architecture of the East. Other paths, as yet untrodden, are pointed out to students of Western mediaeval art.

The historical arguments, which form an essential part of my work, are the result of long and patient study of the original sources. Further, all

the existing buildings or monuments described in this book have been, with rare exceptions, personally investigated on the spot. These buildings and monuments represent but a very small part of those which I have examined. The rest have been omitted here, either because they did not appear to me to throw any fresh light upon the subject, or because they were not directly connected with it.

TRANSLATOR'S PREFACE

THE Author's Preface and the Introductions to the two parts of this book explain so clearly its origin, method, and scope, that it is unnecessary for me to say more than a few words with regard to the translation which is now presented to the English-speaking public.

In the first place I should like to point out that it is not a mere reproduction of "Le Origini dell' Architettura Lombarda" (1st edition, Loescher, Rome, 1901 and 1907, 2 vols.: 2nd edition, Hoepli, Milan, 1908, 1 vol.). The great bulk of the material and its treatment of course remain the same; but the Author has taken advantage of the translation to revise the whole work, with the result that considerable improvements have been made in the form of correction, amplification, re-statement; not to speak of important additions to the subject matter, among which we may call especial attention to the account of the so-called Temple of the Clitumnus, and the Excursus on Hadrian as an architect.

In the next place I think it is due to the Author to explain his relation to this version. Throughout it has had the advantage of his personal supervision in a very exceptional manner. Signor Rivoira's knowledge both of the English language and of English architectural and archaeological terminology is such that he has been able to exercise a real control over every word that I have written. Constantly when difficulties have arisen (and they have not been few) as to the rendering of passages or phrases connected, for instance, with such abstruse and technical matters as vault and dome construction, it is he who has provided the solution. I think it will be admitted that it is an inestimable advantage thus to get the Author's own version of his statements, so that the originality and individuality of his presentation may be conveyed direct to his readers.

With regard to my own part in the translation, it has been one of my main objects to preserve this individuality; and I would ask those who may feel aggrieved at new or unusual forms of description or statement, to remember that a large part of the value to us of works which come from other countries and other intellectual atmospheres consists in the freshness and novelty of the presentation. Above all I would ask them to reflect that, in this case, the form of statement and the terms have been settled by one who comes from the land and belongs to the race which created the art of vault construction, and fostered its development from Roman times onwards.

As Italy was the cradle of Western achitecture, it is not unnatural to find that the Italian architectural vocabulary is in some respects richer than our own. Accordingly we have thought it advisable, in the interests of simplicity and convenience, to Anglicize a few Italian technical terms, such as the following. "Lesena" has always been retained in place of "pilaster-strip." "Pulvino," of which various renderings appear in English writers, naturally becomes "pulvin." The rudimentary pendentive or squinch which is described in Italian as a "raccordo d'angolo," in the same way naturally appears as "raccord." Other phrases have been translated in the simplest and most direct manner, so that, for instance, "crociera di sesto rialzato" appears (without having recourse to the expedient of rendering one foreign language by another, and using such a term as "surhaussée") as "raised," and in the converse case "unraised," "cross vaulting." We can only ask for a kindly reception and consideration of these and similar innovations.

G. McN. RUSHFORTH.

October, 1909.

The great majority of the illustrations which appear in this book are derived from photographs taken expressly for the work. Many of those in Volume II are by Lionel Johnson, Esq. For a few I am indebted to Miss P. Bruce and Miss Bulwer; also to Dr. T. Ashby, Prof. Camille Enlart, Dr. Paul Gauckler, Dr. Henry Gee, Harold Johnson, Esq., and F. Tuckett, Esq.; to all of whom I offer my sincere thanks.

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PART I

INTRODUCTION

THE unravelling of the tangled skein which involves the dark age of Italian architecture, from the second half of the VIth century to the second half of the XIth, that is to say, from the descent of the Lombards into Italy down to the appearance of the Lombardic or Comacine style, has been a very slow process. The explanation is to be found in the confusion engendered by the disputes, and sometimes the mistakes and prejudices of not a few of the most prominent writers on this subject with regard to the age and style of monuments of that epoch. Another reason is that such writers either study books too much and the monuments too little, or else they shut their eyes and accept statements which have no foundation in fact, or wander out of the way, restlessly seeking in distant lands for the origins, influences, examples, and craftsmen, which they might have found without any trouble in Italy.

Hence the history of Lombardic architecture remains, on the whole, to-day a great collection of problems; and a solution of them which, if not definitive, shall be at least fairly approximate, is a matter of neither easy nor rapid accomplishment.

So much by way of preface. I will now indicate in a few words the conception which forms the basis of the present work.

Lombardy was the cradle of the style which preceded the Lombardic no less than of the Lombardic itself. It was the product of the Comacine or Lombard gilds, and its real beginnings must be referred to the days of the Lombard King Autharis (583–590) and his immediate successors Theodelinda (590–625) and Agilulf (590–615), when the School of Ravenna, founded in consequence of the transfer to that city of the seat of the Western Empire (404), had already entered upon its long course of decay.

It is my privilege to reveal for the first time to the world of students this

unknown but important School. It was from the productions of its craftsmen that the Lombard gilds derived their inspiration, borrowing, to begin with, merely various original motives of architectural decoration, and then some organic elements of construction, both of primary and secondary importance. To these productions we shall devote a special study.

In the days of the above-named sovereigns, when these gilds (whose members—the Comacine masters—though they have been the subject of much discussion, I shall deal with but briefly) were called in to erect their buildings, the condition of art in Lombardy, as indeed in every other part of the peninsula subject to the Lombards, was deplorable. It is true that, ever since Maximian (286–310) had made Milan his official residence, the Emperors, who were often kept there by the necessity of defence against various barbarian enemies, had turned their attention to beautifying the city, restoring existing buildings and erecting new ones. Hence Ausonius could write:[1]

Omnia quae magnis operum velut aemula formis
Excellunt nec iuncta premit vicinia Romae.

In this way a wide field for the exercise of their ability was offered to the craftsmen of Italy, but especially to those of Lombardy, who for centuries had found no lack of employment in their own district, particularly at Milan, which from the time of Augustus has been an important and wealthy city. In 404, however, Honorius transferred his court to Ravenna, and this was regarded as the seat of government and the capital of Italy until Odoacer put an end to the Western Empire (476). On such an occasion it is reasonable to suppose that not a few, and among them the best craftsmen of Milan, migrated thither.

From that time onwards the fortunes of Milan, and with them the conditions of Lombardy steadily declined, until a climax was reached in the devastations of Attila (452). Restored in the days of the first Gothic kings, so that Milan became, after Rome, the first city of the West for size, population, employment, and wealth, its prosperity came to a speedy downfall at the hands of Uraias (539). Revived to some extent by Narses after he had been made exarch (554), its condition sank to the lowest depths under Alboin (568–572), Clefi (572–573), and the confederate Lombard dukes (573–583), whose history, like that of the conquered Italians, is one unbroken tale of oppression, plunder, and bloodshed. To these calamities was added the double scourge of pestilence and famine which, about the year 556, smote

[1] *Monumenta Germaniae historica.—Ordo urbium nobilium.*

Lombardy in common with the rest of Italy. Next came the transfer of the episcopal see of Milan to Genoa in consequence of the flight of Bishop Honoratus (568–572) in terror at the approach of the hordes of Alboin.

Hence we need not be surprised if the first productions of the Comacine gilds were only such as the unhappy times allowed of. Still, the numerous buildings which they were called upon to erect, restore, or decorate, during the Lombard rule (under which they enjoyed special privileges) gave their members opportunities of exercising hand and brain, and of raising art to some extent from the slough of barbarism in which it was plunged. Such progress did they make that, in the VIIIth century, we find that, while in buildings of their own creation hardly any advance in the principles of construction is to be discovered, progress in architectural ornament and decorative carving is fairly well marked. We find, too, that Lombard carvers were in such request for work of this kind, that their presence is apparent in works executed in that age, not only in many parts of Italy, but also in Dalmatia and in the countries north of the Alps. Later, in the time of Charles the Great, and after he had become king of the Lombards (774), the Comacine masters had the opportunity, besides employing their chisels in a far wider field, of taking part, together with the craftsmen of Ravenna, in the construction of the most important buildings erected by that monarch, or produced in imitation of them; and they acquired in the course of their execution some degree of experience in the difficult and, to them, unfamiliar art of vault construction.

Fortified by the valuable knowledge thus acquired, the Lombard gilds proceeded to take part in the erection of the numerous and occasionally sumptuous buildings raised by the liberality of two magnificent prelates, Angilbert II (824–860) and Anspert (869–882), in Milan and the districts subject to their spiritual authority: and it was then that were laid the first solid foundations of the Lombardic ecclesiastical architecture of the future. Indeed, from this time onwards, we see them eager in searching among the ancient buildings of Rome and Ravenna for elements which, when developed, would lend themselves, by means of a rational evolution, and supplemented by new ones, to transform Roman architecture into a new style, thought out by themselves, and destined to serve new needs, as well as to adapt itself to changes of taste.

To facilitate and hasten an evolution of this kind there contributed mainly: the fear that the world was coming to an end; the widespread religious movement which originated therefrom; the breath of Liberty which stirred the peoples of Italy; and,

lastly, the improved conditions of the country, resulting from the new life infused into commerce and industry which had begun to make its presence felt there in the second half of the Xth century.

In this way, when the first quarter of the XIth century was reaching its close, the Lombardic architectural organism was already formed, and in the second half of that century there appeared the earliest types of the vaulted Lombardic basilica.

CHAPTER I

THE ROMANO-RAVENNATE AND BYZANTINO-RAVENNATE STYLES

FROM HONORIUS TO THE END OF THE KINGDOM OF LOMBARDY

WHILE not denying—it would be folly to do so—the share of the East in the birth of the arts of the West, I do not believe, as many do, that, from the period when Honorius moved the Imperial residence to Ravenna (404) down to the fall of the kingdom of Lombardy, Italy, as often as she wanted to produce something not of mere rude workmanship, found herself obliged to fall back upon artists from the East, whether painters, mosaic-workers, goldsmiths, carvers, or architects and builders. My view rather is that the better works, at least in the case of architecture and sculpture, the two branches of art which have formed my special study, or those which in any way influenced the origins of Lombardic architecture and were executed during those centuries in the exarchate of Ravenna, the kingdom of Lombardy, and the duchy of Rome, ought to be assigned as follows. In the case of architecture to Italian craftsmen, mainly, however, those of Ravenna, with whose productions we shall accordingly be almost exclusively occupied. In the case of sculpture—restricting ourselves to works of purely Byzantine style executed in the days of Theodoric (493–526) and of Justinian I (527–565)—to Greek artists, after allowing a very modest share to the chisels of the School of Ravenna. And, thirdly, in the case of sculpture carried out in a form and style of carving which is merely Byzantinesque, to Italian artists, and before all, those of Ravenna. This opinion I shall support by historical considerations, but mainly by the study and comparison of the monuments themselves.

* * *

A century after the death of Diocletian (313), the Western Empire, on the eve of its disappearance, imparted to its last capital, Ravenna (404–476), a splendour to which Constantinople was as yet a stranger.

In the days of Honorius (395–423) and Galla Placidia (408–451), contemporary with whom were the archbishops Peter I (396–425), Exsuperantius (425–432 or 439), Peter II Chrysologus (433 or 439–449 or 458), and Neon (449 or 458–477),[1] the best craftsmen of Milan, whose opportunities for exercising their talents and making money had, since the transfer of the Imperial residence, become few and far between, flocked to Ravenna, attracted thither by the numerous works of importance in course of execution, and by the hope of lucrative rewards. And so, long before the erection of St. Sophia at Constantinople (532–537), the tomb of Galla Placidia was already gleaming with the gold of its mosaics. Mosaics and marbles not less splendid

[1] The dates of the archbishops of Ravenna are derived from the chronological table published by Giani, *Studi storici*, Vol. VII.—*Alcune osservazioni su la cronologia di Agnello Ravennate.*

were used to decorate, not to speak of other buildings, the Basilica Petriana at Classis, the extent and magnificence of which made it one of the wonders of the city (396–425), the basilica of San Giovanni Evangelista (425), the chapel of San Pier Crisologo (433 or 439–449 or 458), and the baptistery of Neon (449 or 458–477). And the buildings which contained these mosaics and marbles, together with other remarkable works which served for the decoration or finish of the structure, showed, either in their plan, or in their internal decoration, arrangements or motives of an original character which constitute a new style, to which I give the name of Romano-Ravennate.

To this style belong the following buildings still existing at Ravenna in a greater or less state of preservation: the basilica of San Giovanni Evangelista (425), the basilica of Sant' Agata (425–432 or 439), the chapel of San Pier Crisologo (433 or 439–449 or 458), the tomb of Galla Placidia (about 440), the basilica of San Francesco originally San Pietro Maggiore (450), and lastly the baptistery of Neon (449 or 458–477). The now rebuilt Basilica Ursiana or cathedral (370–384) belonged to the same category.

THE BASILICA URSIANA was founded and completed by Archbishop Ursus (370–396) who gave it his own name and dedicated it to the Resurrection.[1] It was rebuilt in the XVIIIth century. From the notes and drawings left by Fabri[2] and Buonamici[3] we know that it consisted of a nave and four aisles, all of very spacious dimensions, roofed with timber, and divided by four rows of marble columns taken from older buildings. The capitals were in some cases sculptured with representations of the eagle and the ram, and they supported pulvins ("pulvini") or impost blocks, marked with crosses. The nave terminated towards the east in an apse, five-sided externally, and semicircular internally. The half-dome was formed of two super-imposed concentric rows of tapering terra-cotta tubes, fitting one into the other. Above these was the framework of rafters and boards forming the roof, covered with sheets of lead placed there, it seems, in the VIIth century, to take the place of the original roofing which apparently consisted of tiles.

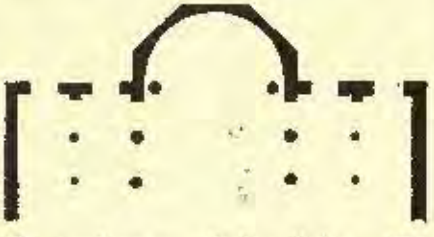


Fig. 1.—Ravenna. Basilica Ursiana. Plan of Apse (370–384). (*From Buonamici, "Metropolitana di Ravenna."*)

This church presents five notable features, the creations of the School of Ravenna, and not of Constantinople as is the universal but erroneous belief.

(1) It is the oldest instance of a basilica with the apse at the east end. Before this, apses were placed at the west; and that not only in the Western world but also in the Eastern, as is shown by Helena and Constantine's church of the Holy Sepulchre at Jerusalem (327–335), and by the Constantinian basilica at Baalbeck, erected in the great court of the temple of Jupiter (138–249), the remains of which were brought to light during the recent excavations,[4] when I had the opportunity of examining them on the spot.

(2) It is the first example of an apse, curvilinear internally, and polygonal

[1] *Monumenta Germaniae Historica—Agnellus, Liber pontificalis Ecclesiae Ravennatis.*

[2] *Le sagre memorie di Ravenna antica.*

[3] *Metropolitana di Ravenna.*

[4] Puchstein, Schultz, Krencker, *Erster jahresbericht über die ausgrabungen in Baalbek. Jahrbuch des kaiserlich deutschen archäologischen Instituts.* 1891.

externally (Fig. 1). The credit of this discovery must be given to the builders of Ravenna, and not to the Byzantines. Indeed, it was only about the middle of the

Fig. 2.—Salonica. St. Sophia. Apses (about 495).

Vth century that the Easterns began to substitute the Ravennate plan for the old form of apse in the Roman civil basilica. As a matter of fact, the apses of the basilicas at Jerusalem and Baalbeck just referred to, are curvilinear on both faces. The same is true of the apse of the chapel at Nureh, also in Syria, which is ascribed to the IVth century.[1] At Constantinople, the first example of a Ravennate apse which can be dated with certainty, is afforded by the church of St. John Baptist, erected by Studius[2] in 463. At Salonica, St. Sophia provides the earliest instance (about 495) (Fig. 2). The older churches of

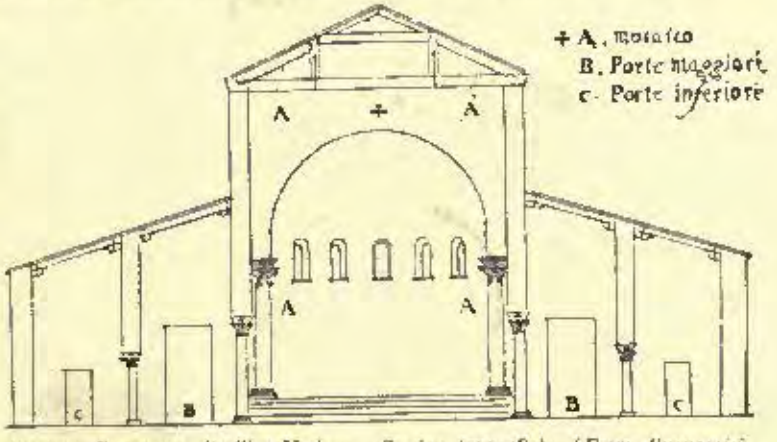


Fig. 3.—Ravenna. Basilica Ursiana. Section (370–384). (*From Buonamici, "Metropolitana di Ravenna."*)

[1] Butler, *Publication of an Archaeological Expedition to Syria in* 1899–1900. *Architecture of Northern Central Syria and the Djebel Hauran.*

[2] *Corpus scriptorum historiae byzantinae—Cedrenus, Compendium historiarum a mundo condito usque ad Isaacium Comenum imperatorem.*

St. George (Vth century), Eski-Djuma, and St. Demetrius (first half of the Vth century), have apses which are purely curvilinear. In Syria, two very early dated specimens are presented by St. George at Ezra (515–516) and the cathedral of Bosra (511–512).

(3) The oldest example of capitals surmounted by the tall pulvins, consisting of inverted truncated pyramids, which are a characteristic feature alike of the Ravennate and of the Byzantine style (Fig. 3).

Fig. 4.—Naples. San Giorgio Maggiore. The old Apse (367—about 387).

As a matter of fact, a contemporary instance is presented by the arcaded apse of the Basilica Severiana, later San Giorgio Maggiore, at Naples (Fig. 4), built by the bishop Severus,[1] who, according to Gams,[2] filled the see between 367 and (about) 387. In this apse the pulvins are ornamented with the cross-monogram, a form which some would tell us does not appear after the VIIth century, though a glance at Plates LIV and LVII in Mabillon,[3] or at a few pages in Kraus,[4] is enough to convince us of the contrary. As Grisar observes,[5] the use of the monogram lasts all through the Middle Ages. Thus it appears, for instance, on the border of the arches framing the apses of San Clemente and Santa Francesca Romana at Rome, the mosaics of which belong, respectively, to the first and second halves of the XIIth century.

Still, taking into consideration the extensive use of pulvins at Ravenna, and in view of the fact that the Basilica Ursiana was consecrated by 384,[6] while the date at which Severus began his church cannot be precisely fixed, it is more natural to refer their origin to the School of Ravenna rather than to that of Campania.

From the point of view of construction, the initial form of the pyramidal pulvin

[1] *Mon. Germ. Hist.—Gesta episcoporum Neapolitanorum.*
[2] *Series episcoporum Ecclesiae Catholicae.*
[3] *De re diplomatica.*
[4] *Real encyklopädie der christlichen alterthümer.*
[5] *Nuovo Bullettino di Archeologia Cristiana*, 1895—*Una scuola classica di marmorarii medioevali. Il tempio di Clitunno e la chiesa spoletina di San Salvatore.*
[6] Fabri, *op. cit.*

is to be found in the cube-shaped blocks, sometimes of considerable height, used by the old Egyptian builders after the creation, some time under the XVIIIth dynasty, of the open flower capital with the object of making the weight of the architrave rest on the centre of the capital and the column beneath it (Fig. 5). The Etruscans, too, sometimes employed such cubes resting on capitals, according to representations in sculpture (Fig. 6). The pulvin may, perhaps, also be connected with the broken architraves from which the Romans sometimes sprang their arches, the pulvin being the reduction of these to their simplest form.

Fig. 5.—Denderah. Temple of Hathor. Portico (1st Century).

In Giuliano da Sangallo's sketch-book in the Vatican Library there is a drawing of arcades belonging to the theatre of Balbus at Rome (erected and dedicated in B.C. 13), showing exactly the same feature. And in the mausoleum known as Santa Costanza, outside the walls of Rome, erected for the princesses of the family of Constantine the Great some time within the decade 326–335, or, to be more precise, between 326 and 329,[1] the arches which carry the cupola spring from the architraves surmounting the twelve pairs of granite columns radiating from the centre. These architraves, like the pulvins, serve the purpose of providing the springers of the arches with a base corresponding to the wall which they carry, while allowing the support beneath to be much slighter without impairing the stability of the structure (Fig. 7).

Fig. 6.—Volterra. Museo Guarnacci. Etruscan Sarcophagus.

From this mausoleum was derived the ancient baptistery, now church of Santa Maria Maggiore, near Nocera dei Pagani (Figs. 8, 9). Its date, however, is not that of the age of Constantine, as is shown by the construction which, though rude, is more advanced than that of the Roman edifice. Thus, the spacious dome, constructed of courses which are horizontal in its lower part and radiating above, is given a hyperbolic curve so as to diminish the thrust; while the circular aisle has a ramping barrel vault, which therefore presses outwards towards the base of the outer wall; and it is crossed at intervals by transverse arches springing from massive vault piers, thus enabling the wall to be reduced to a moderate thickness. We must not, however, put the date too late, especially when we consider the extensive use made in it of Roman columns and capitals. The probability is that it was erected in the second half of the IVth century, or at latest in the early years of the Vth, and

[1] De Rossi, *Musaici cristiani delle chiese di Roma anteriori al secolo XV.*

certainly well before the baptistery of Soter, otherwise San Giovanni in Fonte (Vth century), at Naples, which shows a distinct advance beyond it in scientific construction.

From Ravenna and Naples the pulvin spread over Italy and beyond. At Rome typical specimens have survived in Santo Stefano on the Via Latina, built, as the inscription tells us, by Demetria in the time of Pope Leo I (440–461). They may also be seen in the round church of Santo Stefano on the Celian (Fig. 10), which in origin, probably, was a building of classical times (65–68) intended for civic purposes, reconstructed on the same plan and with the same object in the days of Valens (364–378) and Gratian (367–383), damaged by fire in 410, and finally restored and altered by Pope Simplicius (468–483), who dedicated it to Christian worship.[1][2] To this transformation belong the pulvins of the outer colonnade. At Perugia they were used in the round church of Sant' Angelo, which should be dated about the middle of the VIth century, before the Lombard invasion (568), for some of the capitals recall others belonging to the reign of Theodoric (493–526) (Fig. 11).

Fig. 7.—Rome. Santa Costanza (IVth Century).

In the East pulvins were not introduced before the Vth century; and if we are referred to buildings in the Byzantine Empire of earlier dates than the basilicas of Ursus and Severus, such dates are erroneous. Thus, for instance, the Cistern-basilica at Constantinople ascribed to Constantine[3]—though, as Van Millingen observes,[4] what steps that emperor took to bring water to his new capital (328), is a matter of pure conjecture—is really the work of Justinian I (527–565), who, if he did not build it, restored it.[5][6] In places it shows the use of pulvins alone, instead of capitals surmounted by pulvins

[1] Lanciani, *The ruins and excavations of Ancient Rome.* [2] Grisar, *Storia di Roma e dei Papi nel medio evo.*
[3] Du Cange, *Historia Byzantina. Constantinopolis Christiana.* [4] *Byzantine Constantinople.*
[5] The dates of the Byzantine Emperors are taken from the chronological table in Van Millingen's *Byzantine Constantinople.*
[6] Gyllius, *De topographia Constantinopoleos et de illius antiquitatibus.—De Bibliotheca Basilica, et de regia porticu, et de Basilica Cisterna.*

in order to fit the columns taken from older buildings. Its vaulting shows a close affinity in construction with that of the other cistern at Constantinople known as "Binbirdirek" — "of the 1001 columns," assigned by Forchheimer and Strzygowski[1] to the year 528. The same may be said of the cistern known as that of Arcadius, also at Constantinople, where the capitals betray their affinity with those of the cistern-basilica just referred to, and the stilted groined vaults indicate an age not earlier than that of Justinian.

Fig. 8.—Nocera dei Pagani. Santa Maria Maggiore (IVth or Vth Century).

In the Eastern Empire no pulvins were to be seen before the Vth century, even in mosaics or sculptured representations. A proof of this is the grand mosaic in the dome of the round church of St. George at Salonica, in which the numerous ecclesiastical buildings supported by columns adorned with various kinds of capitals, do not exhibit a single pulvin (Fig. 12). To this day[2] some think that in this church the external flying buttresses corresponding to the sanctuary arch, are original, thus perpetuating the error into which Texier and Pullan fell;[3] whereas they are a later addition. This device, however, was already

Fig. 9.—Nocera dei Pagani. Santa Maria Maggiore (IVth or Vth Century).

[1] *Die byzantinischen Wasserbehälter von Konstantinopel.*

[2] *Journal of the Royal Institute of British Architects*, 1907—Gourlay, *Salonica: the ancient Thessalonica.*

[3] *L'architecture byzantine.*

Fig. 10.—Rome. Santo Stefano al Celio (IVth and Vth Centuries).

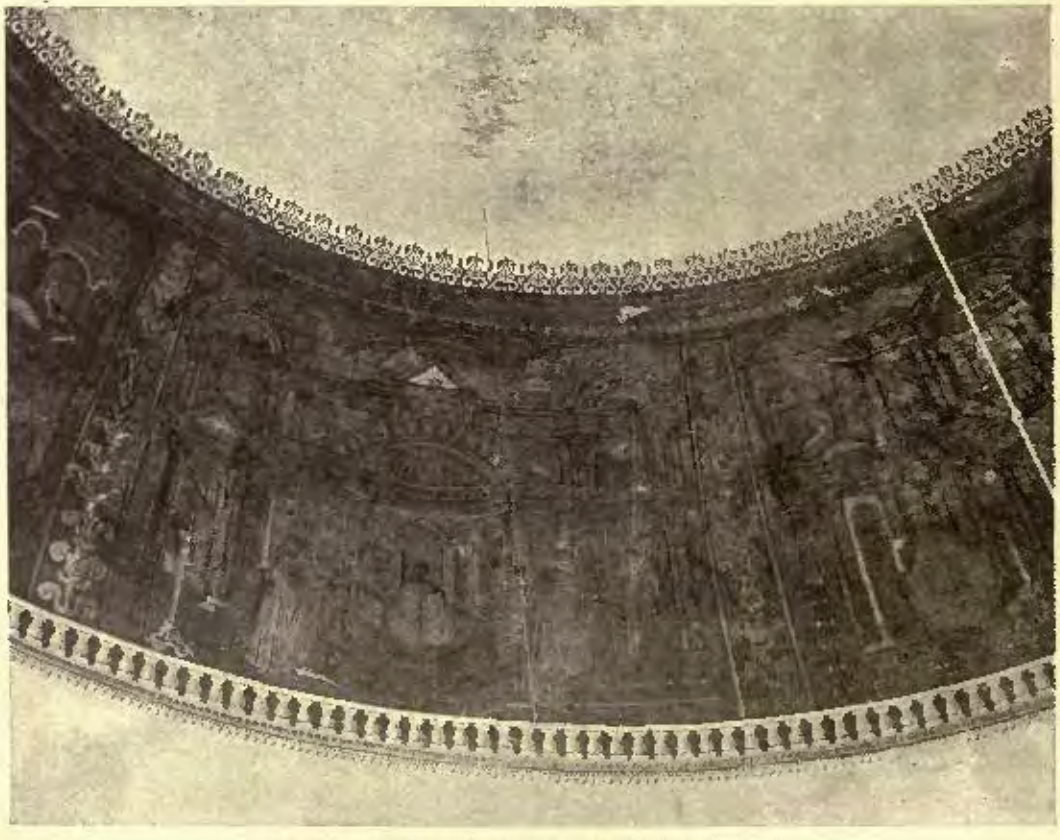


Fig. 12.—Salonica. St. George. Mosaic (Vth Century).

known to the Romans, for we still possess[1] the plan of a building in which the frontal arch of the apse and the apse itself are strengthened externally by pilasters kept up on the outside by buttresses pierced with relieving arches which carry the thrust (Fig. 13).

The date of this round church of St. George must be fixed after the second quarter of the IVth century, in view, among other things, of the mosaics in the heads of some of the semicircular recesses, which show an obvious derivation from the compartments of mosaic decoration on the annular barrel vault of the mausoleum of Santa Costanza at Rome. But it must be earlier than the middle of the Vth century, on account of its apse which presents, just like that of the basilica of Eski-Djuma at Salonica, a high plinth on the outside, from which rise buttresses, instead of an elegant arcade with marble shafts, like the apse of St. Demetrius in the same city which must have been erected about the middle of the Vth century. We may therefore place it in the closing years of the IVth or the early ones of the Vth century, after the appearance of the arcaded choir in San Sebastiano outside the walls of Rome, the dated prototype of this arrangement going back to the days of Pope Damasus (366–384),[2] and in the contemporary choir of San Giorgio Maggiore at Naples (367 and about 387). A precisely similar design may be observed in the mosaics of St. George at Salonica. The representation of St. Porphyrius, who must be the Porphyrius of the time of Arcadius (395–408), among the figures of saints in the mosaic of the dome, would lead us to fix the date of the church preferably in the first years of the Vth century, and before the construction of St. Demetrius. Our statement about the comparatively late introduction of pulvins in the East is also supported by the evidence of the base of the obelisk of Thothmes III, set up by Theodosius the Great (378–395) in the Hippodrome of Constantine at Constantinople, where the coarse bas-reliefs show the Imperial tribune surmounted by an arch which springs from the capitals without the interposition of pulvins (Fig. 14).

Fig. 11.—Perugia. Sant' Angelo (VIIth Century).

The first appearance of pulvins in the Byzantine world occurred, apparently,

[1] Vatican Library. Cod. Lat. 3439.
[2] Duchesne, *Le liber pontificalis*.

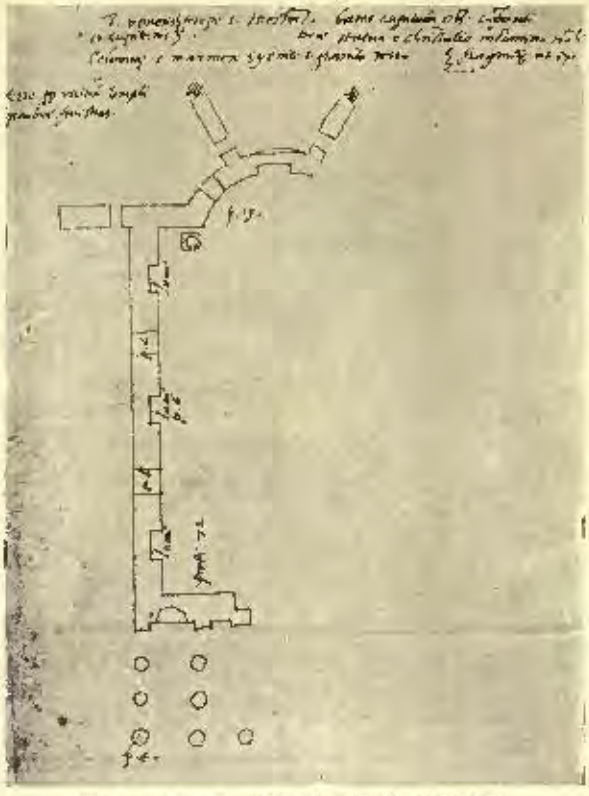


Fig. 13.—Rome. Plan of an Ancient Building.

in the old basilica of Eski-Djuma at Salonica, a city of primary importance in the Empire, which must have been erected about the close of the first quarter of the Vth century, for the following reasons.

First and foremost, the capitals of the colonnades at the lower end of the nave (Fig. 15) present a Byzantine version of the Roman Composite capital, to which no certainly dated parallel can be found before the Vth century. This version, with its acanthus foliage, where on the surface of each acanthus leaf there appears the outline of a smaller leaf traced by drill holes, is earlier than the more advanced and more purely Byzantine Composite capitals, with foliage of the *acanthus spinosus* packed into shells and surmounted by birds, which are to be seen in the apse of the basilica of St. Demetrius in the same city.

Next, the two tiers of colonnades consist simply of columns, whereas those in St. Demetrius (Fig. 16) are composed of columns and piers, an arrangement which marks a constructive advance beyond that of Eski-Djuma.

Then, in St. Demetrius there may be seen, in addition to those which we have described, Byzantine Composite capitals (Fig. 17) with single acanthus leaves

Fig. 14.—Constantinople. Base of the Obelisk of Theodosius (378–395).

minutely and sharply serrated, each separate, or with the points meeting arch-wise. This free movement of the leaves originated later than the time of Antoninus Pius (138–161) in Syria,[1] where some of the earliest examples may be noticed in the great square court of the temple of Jupiter at Baalbeck, which court was erected in the reigns of Septimius Severus and Caracalla (193–217). In Italy, its beginnings may be seen in a support of a table in the house of Cornelius Rufus at Pompeii. These Composite capitals, taking into account the novelty of their design and the fineness of the execution, are another proof that St. Demetrius belongs to a later date than Eski-Djuma.

Fig. 15.—Salonica. Eski-Djuma (Vth Century).

Lastly, the apse of Eski-Djuma is still devoid of ornament on the outside, whereas that of St. Demetrius is decorated with arcades.

Having settled the question of the priority of Eski-Djuma over St. Demetrius, let us see whether we can approximately fix the dates.

St. Demetrius presents three new types of Byzantine capitals: the cubical or melon-shaped; the Composite, with leaves blown by the wind in two opposite directions (Fig. 18); and, lastly, the bird and basket Composite, in which birds take the place of volutes (Fig. 19).

Now if the first two of these types be compared with the cubical funnel-shaped capitals (Fig. 20), and the Composite ones showing the leaves blown by the wind from right to left, in St. Sophia at Salonica, completed in 495, the date given by its mosaic inscription, it will be found that the latter, particularly the Composite ones, which, to my mind, are the most beautiful specimens of this type of the Vth and VIth centuries which the East can show, reveal an art in a more advanced stage than that of the capitals of St. Demetrius.

[1] Rivoira, *Della scoltura ornamentale dai tempi di Roma imperiale al Mille*, in the *Nuova Antologia*, 1904. No. 790.

Accordingly, the foundation of St. Demetrius, for the exact year of which no certain evidence exists, with the exception of a fragmentary inscription on marble relating to a donation of Justinian II's (685–695),[1] must be somewhat earlier than that of the before-named St. Sophia, and goes back to about the middle of the Vth century. The church of Eski-Djuma must therefore have been built before the

Fig. 16.—Salonica. St. Demetrius (Vth Century).

middle of the Vth century, and after the IVth century; in other words, about the end of the first quarter of the Vth century.

(4) The archetype of the domical vault entirely constructed of tapering tubes (Fig. 21) inserted one inside the other. This tubular concentric system, which was also employed in the apse of the basilica of Sant' Agata (425–432 or 439) at

[1] Papageorgiu, *Un édit de l'Empereur Justinien II en faveur de la basilique de Saint-Dimétrius à Salonique.*

Fig. 17.—Salonica. St. Demetrius. Capital (Vth Century).

Fig. 18.—Salonica. St. Demetrius. Capital (Vth Century).

Fig. 21.—Ravenna. Basilica Ursiana. Tube from the Apse (370-384).

Fig. 19 Salonica. St. Demetrius. Capital (Vth Century).

Fig. 20.—Salonica. St. Sophia. Capital (about 495).

Ravenna, quickly spread in Italy, and was made use of, for instance, by Pope Hilarius (461–468) when he added three chapels to the baptistery of St. John Lateran at Rome, rebuilt by Xystus III (432–440); and also in the (presumable) basilica of Fausta at Milan, where in front of the apse is a transept crowned by a cupola, regarded as a work of the end of the Vth or beginning of the VIth century.[1]

Fig. 22.—Rome. Mausoleum of St. Helena (IVth Century).

Its origin, the credit of which must be given to the School of Ravenna, is to be sought in the Roman device of relieving the weight of a dome by means of concentric rows of amphorae, in conjunction with the other expedient of hollow tubes, sometimes employed by the builders of Numidia in their vaulting. I may remark that, before the Romans and the Numidians, the Campanians had made use in their vaulting of amphorae and terra-cotta tubes: the Thermae Stabianae at Pompeii are there to prove it. Of the former method of relieving a dome, a very early example is furnished by a polygonal hall standing near the circular sepulchral edifice known as the "Tor de' Schiavi," in the Villa of the Gordians on the Via Praenestina near Rome; a villa which, as a whole, is ascribed to the IIIrd century.[2]

Another instance of somewhat later date is afforded by the mausoleum of St. Helena on the Via Casilina, also in the neighbourhood of Rome (IVth century) (Fig. 22). The use of amphorae in ordinary vaulting is as old as the time of Caligula (37–41), in whose palace on the Palatine they are employed to diminish the weight on the haunches.

As for the hollow terra-cotta tubes inserted one inside the other, the Baths

[1] Landriani, *La basilica ambrosiana. I resti della basilica di Fausta.*

[2] Nibby, *Analisi storico-topografico-antiquaria della carta de' dintorni di Roma.*

of Tabarka (not earlier than about the middle of the IIIrd century), demolished in 1900, but described to me by Gauckler, the late Director of Antiquities in Tunis, exhibited concrete vaulting which partly rested on centering of tubes of this description.

(5) The oldest example of a spherical vault in masonry, with a wooden roof above it. This treatment is not met with in any dated Eastern structure of the kind earlier than, or even contemporary with, the Basilica Ursiana at Ravenna.

Fig. 23.—Ravenna. San Giovanni Evangelista (425).

THE BASILICA OF SAN GIOVANNI EVANGELISTA was founded by Galla Placidia[1] in 425.[2] In the XVIIIth century, as the building had sunk, the columns were raised and the arches of the nave rebuilt, the walls above them being also raised. In spite of the alterations which it has undergone the church preserves its original form.

The nave (Fig. 23), which looks east, ends in an apse, curvilinear internally and polygonal externally. The aisles, on the other hand, terminate in two rectangular sacristies. This arrangement, a very early instance of which is afforded by the church of Musmieh in Syria (Fig. 24), fitted up, according to De Vogüé,[3] before the IVth century, in a Roman Praetorium of the time of the Emperors Marcus Aurelius (161–180) and Lucius Verus (161–169), was no new thing in Italy. Previous examples are: (1) the apse of the basilica-like structure built of square blocks of peperino with bonding courses of bricks in the ruins of the villa known as the "Sette Bassi" on the Via Latina near Rome, which, as the brick-stamps show, belong to the period between the years 100 and 155;[4] (2) the basilica of the Xenodochium erected by Pammachius at Porto near Rome, about 398[5] (Fig. 25); (3) the large basilica of Santa Sinforosa on the edge of the Via Tiburtina, considered to be not later than about the Vth century;[6]

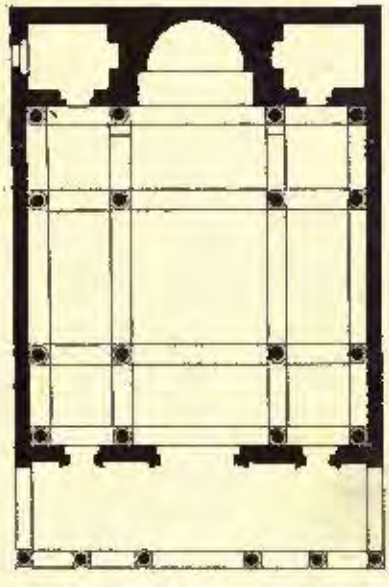


Fig. 24.—Plan of Church at Musmieh (IInd and IIIrd Centuries).

[1] *Mon. Germ. Hist.*—*Agnellus, Liber pontificalis.*

[2] Fabri, *op. cit.*

[3] *Syrie centrale. Architecture civile et religieuse du Ier au VIIe siècle.*

[4] *Papers of the British School at Rome*, Vol. IV.—Ashby, *Classical topography of the Roman Campagna.*

[5] *Bullettino d'archeologia cristiana*, 1865.—Lanciani, *I monumenti cristiani di Porto.*

[6] *Gli studi in Italia*, Anno I.—Stevenson, *La basilica di S. Sinforosa e di suoi sette figli al nono miglio della Via Tiburtina.*

(4) San Salvatore at Spoleto, not later than the IVth century; and (5) the basilica of St. Paulinus at Nola (394–402).

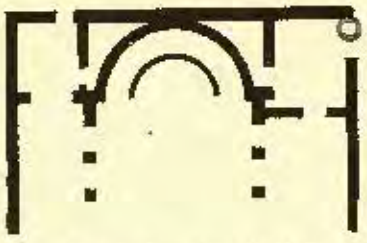


Fig. 25.—Porto. Xenodochium of Pammachius. Plan of Apse in the Basilica (about 398).

This arrangement originated in Rome. The basilica of Domitian's Imperial Palace, begun by Vespasian after the year 69, has its apse confined between two service rooms (Fig. 26). Syria took it from Rome, and applied it not only in the Praetorium of Musmieh, now destroyed, but also in the Tychaion at is-Sanamen (192).[1]

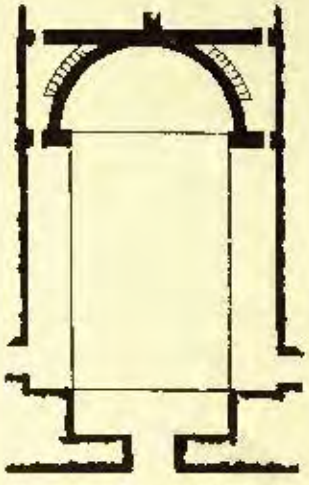


Fig. 26.—Palace of Domitian. Plan of Basilica (about 69–85).

The walls of San Giovanni at Ravenna, constructed exclusively of courses of bricks separated by beds of mortar of irregular thickness, are decorated externally on the sides of the nave with blank arcades resting on a plinth. The same feature occurs in the basilica of Sant' Agata erected by Gemellus, administrator of the Church of Ravenna in Sicily under

Fig. 27.—Ravenna. Sant' Agata (425 432 or 439).

the archbishop Exsuperantius (425 432 or 439)[2] (Fig. 27). Within every arch a large round-topped window opened, the head of which, like the arch itself, is framed by a

[1] *Revue Archéologique*, 1906—Butler, *The Tychaion at is-Sanamen and the plan of early churches in Syria.*
[2] *Mon. Germ. hist.*—*Agnellus, Liber pontificalis.*

ring of bricks laid lengthwise. The arched corbel course above is an addition of the XVIIIth century.

This motive of arcading, a favourite one with the School of Ravenna, had already been applied to other ecclesiastical buildings—for example, the church of San Protaso at Como (391–420),[1] now turned into a factory, and was borrowed from the Romans, who employed it from the age of Augustus onwards, the arcades being sometimes completely blank, at others pierced with openings. The octagonal vestibule of the Piazza d'Oro in Hadrian's villa at Tivoli (125–135) is decorated with blank arcades. In Sangallo's sketch-book in the Vatican Library may be seen a group of round buildings at Baiae, to be ascribed to the time of the latter Emperor, one of the most flourishing periods of that famous bathing place, decorated internally with high and narrow blank arcades.

Fig. 28.—Rome. Sketch of an ancient Bas-relief.

Another drawing shows a portion of the "Crypta Balbi" presenting a range of blank arcades in its upper story. In the Vatican volume previously referred to,[2] there are drawings of fragments of reliefs of the classical period representing a triumphal procession and a sacrifice, with an architectural background displaying, in addition to series of isolated or continuous pediments, arcades, apparently blank, springing from pilasters or columns (Figs. 28 and 29). There have recently been discovered at Terni in front of the Porta Spoletina the basements of three Roman tombs,[3] assigned by some to the family of the Taciti,[4] the elevation of which has been preserved to us by a pen-and-ink sketch in the Uffizi at Florence. One of these tombs was encircled by a blank arcade. In Schedel's panorama of Rome (1493), reproduced by De Rossi,[5] similar arcades may be seen on the exterior of two circular buildings standing to the right of the Flavian Amphitheatre. Others are to be observed on three structures of the same kind adjacent to the Baths of Diocletian in the Mantuan bird's-eye-view plan of Rome, also reproduced by De Rossi; and lastly, on two exactly similar buildings situated to the right of the aforesaid baths, represented in a panorama of Rome which I noticed in a picture in the Städel Institute at Frankfort. In the ruins of the villa which goes by the name of "Centroni" (IIIrd century)

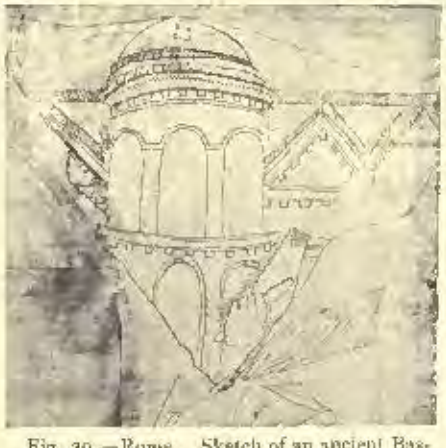


Fig. 29.—Rome. Sketch of an ancient Bas-relief.

[1] *Rivista archeologica della Provincia di Como*, fasc. 25—*Chiesa di San Protaso nei sobborghi di Como.*

[2] Vatican Library, Cod. Lat. 3439.

[3] *Bollettino d'Arte*, Anno II.—Sordini, *Dei sepolcri dei Taciti in Terni.*

[4] *Atti della R. Accademia dei Lincei*, Anno CCCIV. *Notizie degli scavi di antichità.*—Lanzi, *Terni, Scoperte nel suburbio.*

[5] *Piante iconografiche e prospettiche di Roma anteriori al secolo XVI.*

(Fig. 30), and of another near "Fontana Piscaro" (to be ascribed to the IInd century), both on the Via Latina near Rome, the outer fronts can still be seen, faced with blank arcades springing from pilasters with engaged half-columns. In the case of "Centroni" the arcades are pierced by circular openings intended to light the cryptoporticus within.

Fig. 30.—Rome. Ruins of the Villa called "Centroni" (IIIrd Century).

The East, too, can show early examples of arcades designed to break the monotony of flat, uninteresting, cold walls of buildings. They do not, however, go back to such remote times as some writers suppose; Dieulafoy among them.[1] As, for instance, the palace of Firuz-Abad in Persia, which is not older than the end of the Sassanid epoch (226–651), as we shall see in due course. The earliest dated specimen of this form of architectural decoration in Persia is presented by the still

Fig. 31.—Ctesiphon. Palace of Chosroes I (531–579). (*From Dieulafoy, "L'art antique dans la Perse."*)

existing façade of the palace erected by Chosroes I (531–579) at his capital, Ctesiphon (Fig. 31).

[1] *L'art antique dans la Perse.*

It is appropriate to mention, at this point, a fact which has escaped the observation of students of the origins of ancient styles of architecture. It would seem from a statement of Faustus of Byzantium (Bk. V, ch. iv), who lived in the IVth century (in the Vatican MS. 9545 is a translation of his work), that if the Sassanids left great monuments, these monuments were erected with the aid of builders from the Romano-Byzantine Empire. As a matter of fact, this passage, which has been kindly translated for me by the distinguished Armenian scholar, Mr. Conybeare, relates that Urhnayr, King of the Albanians, with his army, before entering on a battle together with the Persians against the Armenians who were allied with the Greeks, carefully exhorted his own men to spare the lives of the Greek prisoners so that they might be available for making bricks and mortar, and could be employed as carvers and masons for the construction of cities, palaces, and other requirements. From this statement we may reasonably suspect that, like the Albanians, the Persians also made use of Roman builders; a fact which would support the theory of direct Greek and Latin influence on Persian art. The fact of such influence is confirmed by a passage of Theophylactus, in whose time (638) it was believed that Justinian had provided Chosroes I not only with Greek marbles, but also with the architects and builders for the palace at Ctesiphon:—"They say that the Emperor Justinian sent to Chosroes Greek marble, and skilled architects and master masons who built him a palace in the Roman style not far from Ctesiphon."[1]

Fig. 32.—Salonica. St. Demetrius. Apse (Vth Century).

Another good instance of wall arcading is the church of St. John Baptist founded by Studius at Constantinople (463), where the three blank arcades of the apse as reconstructed by Salzenberg[2] are apparently the result of the restoration which the building underwent at the time of Constantine Palaeologus Porphyrogenitus, brother of Andronicus II Palaeologus (1282–1328).[3]

Externally, the walls of the chapels which form the termination of the aisles of San Giovanni Evangelista are strengthened at the angles by two buttresses, and are ornamented at the top by bands enclosing a cornice of bricks set saw-tooth wise. This form of ornament was not borrowed, as some think, by Ravenna from the Byzantines, for it was only in the Vth century that the latter began to decorate the topmost cornices of their ecclesiastical buildings with it; so that, while at Salonica the church of St. George (first years of the Vth century) is merely finished off at the top by plain stringcourses, in the basilicas of Eski-Djuma and St. Demetrius (Vth century) the use of the saw-tooth may be seen (Fig. 32). It was derived, as a matter of fact, from the Romans, who had used it since the times of Maxentius (306–312), Valens (364–378), and Gratian (367–383), as is proved by the *Heroon* of Romulus,

[1] *Corpus script. hist. byz.—Theophylactus Simocatta, Historiae.*
[2] *Alt-christliche baudenkmale von Konstantinopel vom V bis XII jahrhundert.*
[3] Du Cange, *Hist. Byz.—Constantinopolis Christiana.*

son of Maxentius, erected in 309 (Fig. 33), and by the drum of the church of Santo Stefano al Celio at Rome, which clearly belongs to the days of Valens and Gratian.

The apse (Fig. 34), which has been tampered with, was of two stages, the lower decagonal, the upper heptagonal. The latter is decorated with an arcade of seven arches resting on pairs of shafts joined back to back by two lateral projections in which were undoubtedly fixed the *transennae* which closed the openings (Fig. 35).

Fig. 33.—Rome. Heroon of Romulus (309).

The square campanile, the upper part of which has been altered, is of a later date than the church itself. Evidence of this is to be found in the fact that it was formed at the expense of the last bay of the south aisle, and in the use of fragmentary materials in its construction which has nothing in common with the uniformity of that of the basilica. If one may judge from the sculptured foliage of a puivin in one of its windows, the workmanship of which betrays a hand near to the XIth century, this campanile should be ascribed to the Xth century.

San Giovanni Evangelista is distinguished by two notable characteristics.

The first is the apse enriched by arcading supported by columns, a decorative feature which speedily made its way through the East, where the oldest instance that I can cite is the basilica of St. Demetrius at Salonica (of about the middle of the Vth century), in which the apse presents a semicircle of five arches, originally closed by *transennae*, supported by columns.

The second is the visible framing line flush with the arches, each of which is enclosed by a ring of bricks laid lengthwise and fitting exactly. As is obvious, this is not a question of the rings of brickwork which the Romans sometimes used for constructive reasons, in order to relieve the arch from the weight

of the super-incumbent wall, added, as in the present case, to the desirability of avoiding the defective junction between bricks set lengthwise and others radiating vertically. Rather we have here a new decorative motive.

This feature was appropriated by the Lombard gilds, who embellished it by the use of polychrome materials in the way which may be seen, for instance, in the basilica and baptistery at Agliate (824–860), and in the parish church of San Leo (879–882). The Greeks also made large use of it in their ecclesiastical buildings of the XIth century, with the addition sometimes of one or two rows of saw-tooth. We may refer in this connection to the old baptistery, now the church of the Holy Apostles (to be ascribed to the first years of the XIth century), and the churches of Kapnikaraea (to be ascribed to the XIth century, and not to the time of the Empress Eudoxia [421–460]), St. Nicodemus, built by Lycos who died in 1044, and St. Theodore (1049) at Athens (Fig. 36). Other instances are the churches of the Virgin (1028) and of the Apostles (to be ascribed to the XIth century) at Salonica.

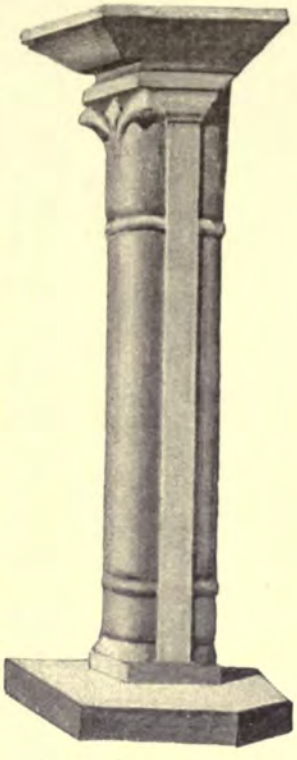


Fig. 35.—Ravenna. San Giovanni Evangelista. Column from external arcade of Apse (425).

Fig. 34.—Ravenna. San Giovanni Evangelista. Apse (425).

Fig. 36.—Athens. St. Theodore (1049).

THE MAUSOLEUM OF GALLA PLACIDIA was erected by order of Galla Placidia about the year 440, and was dedicated to Saints Nazarius and Celsus.[1] Its plan (Fig. 37) is that of a cross with arms of unequal length, the so-called Latin cross as opposed to that with equal arms known as the Greek cross: plans which, in either case, had their origin in Roman tombs, a fact of which anyone may convince himself by a glance at the sketches of Bramantino, reproduced by Mongeri,[2] of Montano,[3] of Serlio,[4] and those in the Vatican volume already referred to.[5]

Over the centre rises a square tower closed above by a conical dome resting on spherical pendentives, each formed by a spherical segment merging in the cupola and developed from a triangular rib projecting from the re-entrant angle of the walls (Fig. 38)

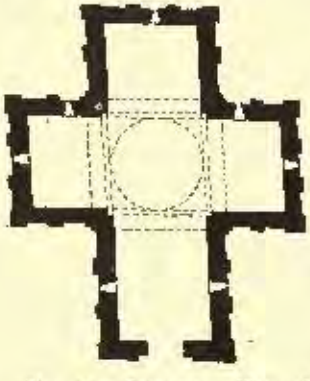


Fig. 37.—Ravenna. Plan of Mausoleum of Galla Placidia (about 440).

The cupola is constructed of bricks (Fig. 39), and its extrados is covered with amphorae (Fig. 40) set in a bed of mortar, on which the tiles rest. The arms of the cross are covered internally by barrel vaults. Externally the brick walls are decorated with blank arches (Fig. 41).

In the tomb of Galla Placidia I should like to call attention to the ground plan and to the pendentives of the cupola.

So far as I am aware, there is no record of churches or tombs older than this mausoleum, having the form of a Latin cross with rectangular extended arms, and not mere apses opposite to one another and starting directly from the central space. For it seems that the cruciform Constantinian church of the Apostles at Constantinople was equilateral.[6]

[1] Tarlazzi, *Memorie sacre di Ravenna.*
[2] *Le rovine di Roma al principio del secolo XVI.*
[3] *Li cinque libri di architettura.*
[4] *De le antiquità.*
[5] Vatican Library, Cod. Lat. 3439.
[6] *Bull. di arch. cristiana*, 1866.—F. Lanciani, *Scoperte negli edifici cristiani di Ravenna.*

And the very ancient church of SS. Peter and Paul, now Sant' Abondio, at Como, of the Latin basilica type,[1] was only erected in the middle of the Vth century (Fig. 42). The basilica, too, of the Holy Cross, built by Galla Placidia [2] in the shape of a Latin cross, and connected, by means of the portico in front of it, with the mausoleum of the Empress, was not erected till towards the year 449.[3]

Fig. 38.—Ravenna. Mausoleum of Galla Placidia (about 440).

Secondly, the pendentives give rise to some important considerations.

The spherical pendentive, of which those of the tomb of Galla Placidia are a complete type in brickwork, was a fairly ancient invention in Italy, where it begins to show itself from the Ist century onwards.

At a far earlier period the Etruscan builders had been content to set the circular

[1] *Rivista arch. della Provincia di Como*, fasc. 30—Barelli, *Basilica di Sant' Abondio nei sobborghi di Como.*
[2] *Mon. Germ. hist.—Agnellus, Liber pontificalis.* [3] Fabri, *op. cit.*

base of a cupola, built of horizontal layers of stone projecting one beyond the other, upon a structure of square plan by the aid of graduated pendentives, as may be seen in the tomb known as that of the "Diavolino" from Vetulonia, now set up in the Archaeological Museum at Florence, and considered to be of the VIIth century B.C. It may be also noticed in another remarkable tomb at Vetulonia, which goes by the name of "La Pietrera." Tombs of the Vetulonian type were also constructed at a late period in Egypt, the Crimea, &c.[1]

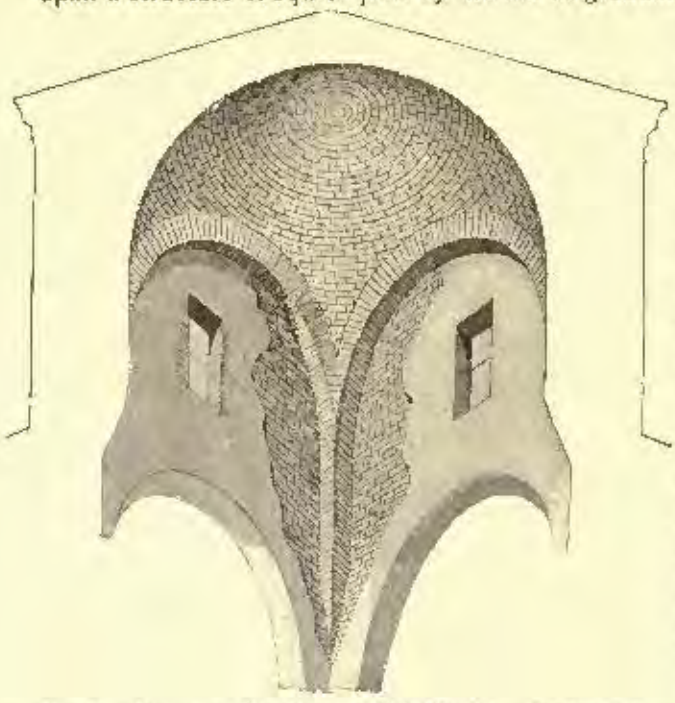


Fig. 39.—Ravenna. Mausoleum of Galla Placidia. Construction of the Cupola (about 440).

Whether the Roman builders had developed the graduated pendentive of the Etruscans, who had been their teachers in the matter of architecture, into the triangular spherical one long before the 1st century, as seems natural and logical, it is impossible to say, for the evidence is still wanting.

It is well known that there are two varieties of the spherical pendentive; in the one, the pendentive and the cupola belong to different spherical planes and curves; in the other, the dome is continuous with the pendentives.

Fig. 40.—Ravenna. Mausoleum of Galla Placidia. Amphorae from the Cupola (about 440).

According to the evidence of existing remains, the first kind had its origin in some such structure as the central chamber of the inner west front of the "Domus Augustana" on the Palatine, rebuilt by Domitian about the year 85.[2] We find that in this square room (Figs. 43 and 44), each side measuring about 23 feet, the dome, much of which has now fallen in, was sustained by the aid of triangular spherical pendentives

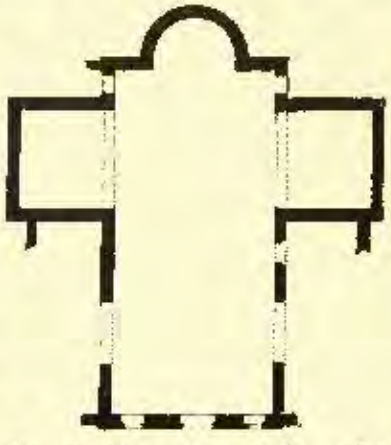


Fig. 42.—Como. Plan of the ancient Basilica of SS. Peter and Paul, now Sant' Abondio (VIth Century). (*From Baltz, "Architettura del medio evo in Italia."*)

[1] *Atti del Congresso internazionale di scienze storiche, Roma, 1903*—Pinza, *Le origini di alcuni tipi della architettura sepolcrale Tirrena nella età del ferro.* [2] Lanciani, *The Ruins and Excavations of Ancient Rome.*

formed of lumps of tufa set in irregular courses on a framework of boards and earth, and backed by concrete, details which have not been noticed hitherto. In the two lateral rooms (each side about 30 ft.) which flank the square central chamber, the square of the ground plan, converted into an octagon by means of four semicircular niches at the angles, passes into the circle of the dome by an irregular transition of the solid mass which forms the construction, composed, as

Fig. 41.—Ravenna. Mausoleum of Galla Placidia (about 440).

in the former case, of a layer of lumps of tufa set in mortar, forming a sort of case on which the concrete of the vault was poured (Figs. 45, 46).

Next to the pendentives of the "Domus Augustana" come the similar ones in the upper story of a tomb of square plan on the Via Nomentana near Rome, not far from the "Casale dei Pazzi" (Fig. 47). The ornamentation and facing of this tomb (Fig. 48) suggest a date contemporary with that of the tomb of Annia Regilla in the "Valle Caffarella," and with other sepulchral buildings near the basilica of Santo Stefano on the Via Latina near Rome, erected in the time of the Antonines (138–192).

Typical is the external facing of these sepulchral buildings, which was in use at Rome only during the IInd century. It does not appear on any existing building of

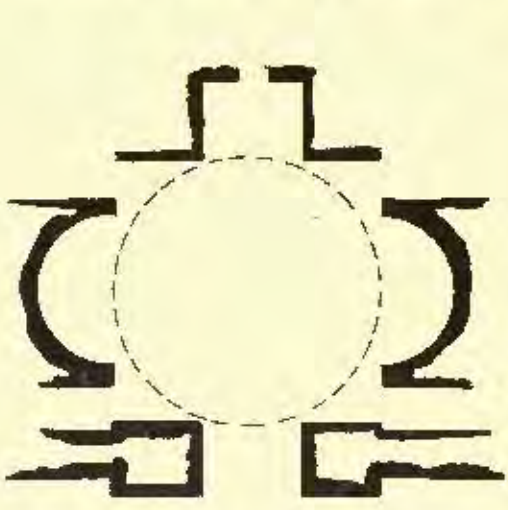


Fig. 43.—Rome. Domus Augustana. Plan of Central Chamber (about 85).

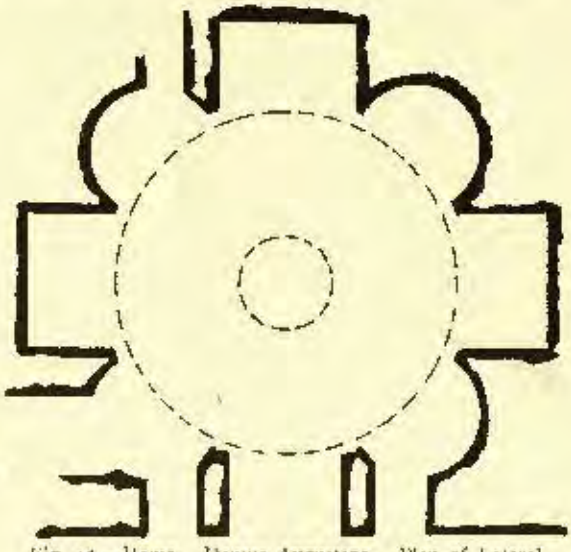


Fig. 45.—Rome. Domus Augustana. Plan of Lateral Chamber (about 85).

Hadrian's time (117–138), nor on any later than the age of the Antonines. This kind of facing is composed of very regularly laid rows of red and yellow broken fragments of flanged or unflanged tiles presenting to the eye only the edge which is unbroken, or which being broken has been made smooth. They are thinned with the hammer in order that the inner surface may take a larger quantity of mortar for holding the bricks together; and this made it possible to use very fine joints of mortar in the visible part of the facing, so that the latter seemed to be a homogeneous mass of brick. The use of materials reduced to this fragmentary condition was suggested by the wish to utilise pieces rejected from the brick kilns, and brick refuse; and moreover it was more economical than using new material broken for the purpose.

Fig. 44.—Rome. Domus Augustana. Pendentive of Dome in Central Chamber (about 85).

This kind of facing recalls the moulded brickwork used for cornices, grooved on the inner face to give a good hold for the mortar and avoid its appearing on the outside. A very early instance of such cornices is provided by the exterior of the original curtain walls of the Practorian Camp at Rome (23 A.D.).

The earliest example of the second

kind of spherical pendentive is afforded by another sepulchral edifice of the IInd century on the Via Nomentana, popularly known as the "Sedia del Diavolo," where the cupola of the upper story was sustained by pendentives formed, at the base of the triangle by plaster, then by courses of fragments of broken bricks laid in such a way as to second the radius produced by the pendentive, and thirdly, by layers of lumps of tufa backed by the concrete (Fig. 49).

Fig. 46.—Rome. Domus Augustana. Dome of Lateral Chamber (about 85).

Next comes an example showing an advance, perhaps because the transition was easier to effect, being generated in a curve of larger radius. It has a facing entirely of brick with concrete above, and is to be seen in a polygonal chamber, strengthened by a central pier in the Middle Ages, which stands near the circular sepulchral edifice known as "Tor de' Schiavi" in the Villa of the Gordians on the Via Praenestina near Rome.

An example showing a further advance, and carried out on a much larger scale, is afforded by one of the great octagonal halls (Fig. 50) on the south side of the Baths of Caracalla at Rome (212–216), where, however, the spherical character of the pendentives is still not very strongly marked, but only appears about halfway up, the lower half forming a reentrant angle which continues the lines of the walls on which the pendentives rest.

Fig. 47.—Rome. Tomb on the Via Nomentana. Pendentive of Dome (IInd Century).

Whether the two kinds of spherical pendentives, one constructed with courses of brickwork, as in the case of the two buildings last mentioned, and the other made of irregular courses of lumps of tufa backed by concrete, as in the case of the "Domus Augustana," were ever completely developed by the Romans, it is impossible to say. My examination, extending over more than thirty years, of every possible ruin of the Roman period in Italy, has not enabled me to clear up the question. Nor is any further light shed by the drawings of buildings which have disappeared. Thus, for instance, we know nothing about

Fig. 48.—Rome. Tomb on the Via Nomentana (IInd Century).

these forms of support originated in Asia. and pendentives forming part of a single curve, from the ruins of Gerasa. It shows, however, an arrangement exactly like that of the so-called "Double Gate" beneath the mosque of "el-Aksa" at Jerusalem, which in its turn betrays its relationship with that of the vaulting of the "Golden Gate" in the same place: buildings which must be ascribed to the VIth century, or, to be more accurate, to the reign of Justinian (527–565). The period suggested by Choisy, viz. that of the Early Empire, while Dieulafoy[3] puts it later than the IIIrd century of the Christian era, is pure guess-work, and has no support in facts.

And also what a singular the real construction of the cupolas resting on pendentives in the sepulchral structures of which Montano[1] has preserved the forms, though he added decorative features on his own account. Still, we may observe that, so far as concerns the first kind, from the pendentives of the octagonal hall of the Baths of Caracalla to those of perfect form of the same kind, is not a long step; and it is certain that the builders of Ravenna boldly employed the perfect spherical pendentive continuous with the dome, in a great cupola such as that of the baptistery of Neon, between the years 449 or 458–477, before the Byzantines applied the other variety, in which the dome and the pendentives belong to different planes and curves, to the spacious cupola of St. Sophia at Salonica (about 495).

There has been an idea that Choisy[2] refers to an example, with cupola

Fig. 49.—Rome. Tomb called "Sedia del Diavolo" on the Via Nomentana (IInd Century).

[1] *Op. cit.*
[2] *L'art de bâtir chez les Byzantins.*
[3] *Op. cit.*

phenomenon so important a discovery would be—and Choisy in the case of Gerasa regards it as the result of an Asiatic conception carried out by a Roman hand—making its appearance in Syria, perfect and complete in the days of the Early Empire, while in that Empire's decline, that is to say in the reign of Diocletian (284–305), those countries, according to De Vogüé,[1] could barely show the earliest dated example, in the chapel of Omm-es-Zeitun (Fig. 51), finished in 282, of an experimental attempt to set a round dome on a square base! In that experiment the builders, instead of taking the trouble to find out scientifically the artistic manner in which to place a vault upon a polygonal building, confined themselves to the device, both unaesthetic and inartistic, of starting bracket-wise from the square base the lines of a polygon, which by gradual multiplication became assimilated to the circle of the dome.

Fig. 50.—Rome. Baths of Caracalla. Octagonal Hall. Pendentives (212–216).

Fig. 51.—Omm-es-Zeitun. Pendentive in Chapel (282).

Choisy mentions other instances at Sardis, Philadelphia, and Magnesia, in Asia Minor. But here again the dates are not known; and the Roman period, to which the eminent writer thinks that they belong, is so uncertain that it cannot be brought forward to any purpose when we are comparing one building with another.

It would, moreover, be inexplicable why the Romans, who were in such direct contact with Asia Minor and Syria, countries from which they even got architects, Apollodorus of Damascus for instance, laboured for centuries in attempts which aimed at solving a difficult problem, the solution of which had already been attained in those countries, and, in the case of Gerasa, put in practice by a Roman hand.

[1] *Op. cit.*

Fig. 52.—Kalat Sim-aan. Church of St. Simeon Stylites. Apse (Vth Century).

THE CHAPEL OF SAN PIER CRISOLOGO was erected by Archbishop Peter Chrysologus (433 or 439–449 or 458),[1] as is confirmed by his monogram in mosaic on one of the arches of the building.

For us the most notable feature of this oratory is the external decoration of brick arcading springing from corbels grouped between lesenas or pilaster strips (a decorative rather than a constructive adjunct); for though the upper part has been tampered with, it was originally decorated with a course of this kind, the lesenas designed to break it being still preserved.

This architectural innovation, which is earlier than that of scallop shells separated by shafts, to be seen in the apse of St. Simeon Stylites at Kalat Sim-aan in Syria, believed by De Vogüé to have been erected at the end of the Vth century[2] (Fig. 52), was employed at Ravenna, almost at the same time, not only in the chapel with which we are dealing, but also in the baptistery of Neon (449 or 458–477) close by, and not far off in San Francesco, founded in 450. The merit of the invention is to be ascribed to the builders of Ravenna, who hit upon the idea of combining continuous rows of small arches, forming as it were a fringe below the eaves cornice of a wall, with Roman lesenas. Such rows of small arches are a Roman invention, and I discovered the archetype for them in the nameless IInd century tomb, proved by its polychrome brick facing to belong to the age of the Antonines, which exists at "Acqua Bollicante," on the Via Praenestina, near Rome (Fig. 53). Rome, too, at one time contained instances of them in the *opus sectile* decorations of the basilica of Junius Bassus on the

Fig. 53.—Rome. Tomb on the Via Praenestina (IInd Century).

[1] Tarlazzi, *op. cit.*
[2] *Op. cit.*

Esquiline (IVth century)[1][2] (Fig. 54), and the mausoleum of Santa Costanza (IVth century).[3]

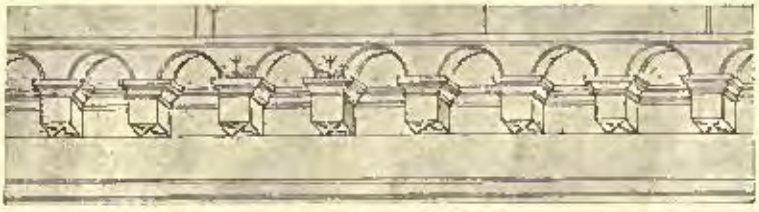


Fig. 54.—Rome. Basilica of Junius Bassus. Inlaid decoration (IVth Century).

In the East, the first ancient example with a fixed date of an arched corbel course is to be found in a gate in the cloister of the eastern church at Babiska (401).[4] The oldest specimen of continuous rows of arches formed into scallop shells, not as yet divided by supporting shafts as in the above-mentioned church of St. Simeon Stylites, is to be found in the existing apse of the church of Arshin, certainly of the VIth century.[5]

The motive of the cornice of arcading springing from corbels, or from corbels alternating with or in groups between lesenas, passed at a later date to the Comacine gilds, and by their means became a strikingly characteristic feature in Pre-Lombardic and Lombardic architecture alike.

Fig. 56.—Ravenna. Baptistery of Neon (449 or 458—477).

THE BAPTISTERY OF NEON OR SAN GIOVANNI IN FONTE was originally a chamber in the Baths which stood near the Cathedral. Archbishop Neon (449 or 458–477) remodelled it as a baptistery, and added the decorations.[6][7]

[1] Ciampini, *Vetera monimenta.*

[2] Volume of drawings by Giuliano da Sangallo in the Vatican Library.

[3] De Rossi, *Mosaici cristiani delle chiese di Roma anteriori al secolo XV.*

[4][5] Butler, *Publication of an archaeological expedition to Syria in 1899-1900. Architecture of Northern Syria and the Djebel Hauran.*

[6] *Mon. Germ. Hist.*—Agnellus, *Liber pontificalis.* [7] Fabri, *op. cit.*

In plan it is an octagon with niches opposite to one another recessed in four of its sides. The interior has two tiers of round arches, one above the other, springing from columns (Fig. 55). In the upper tier every arch encloses a triplet of arches, the middle and largest one being pierced by a window. From this upper tier the hemi-

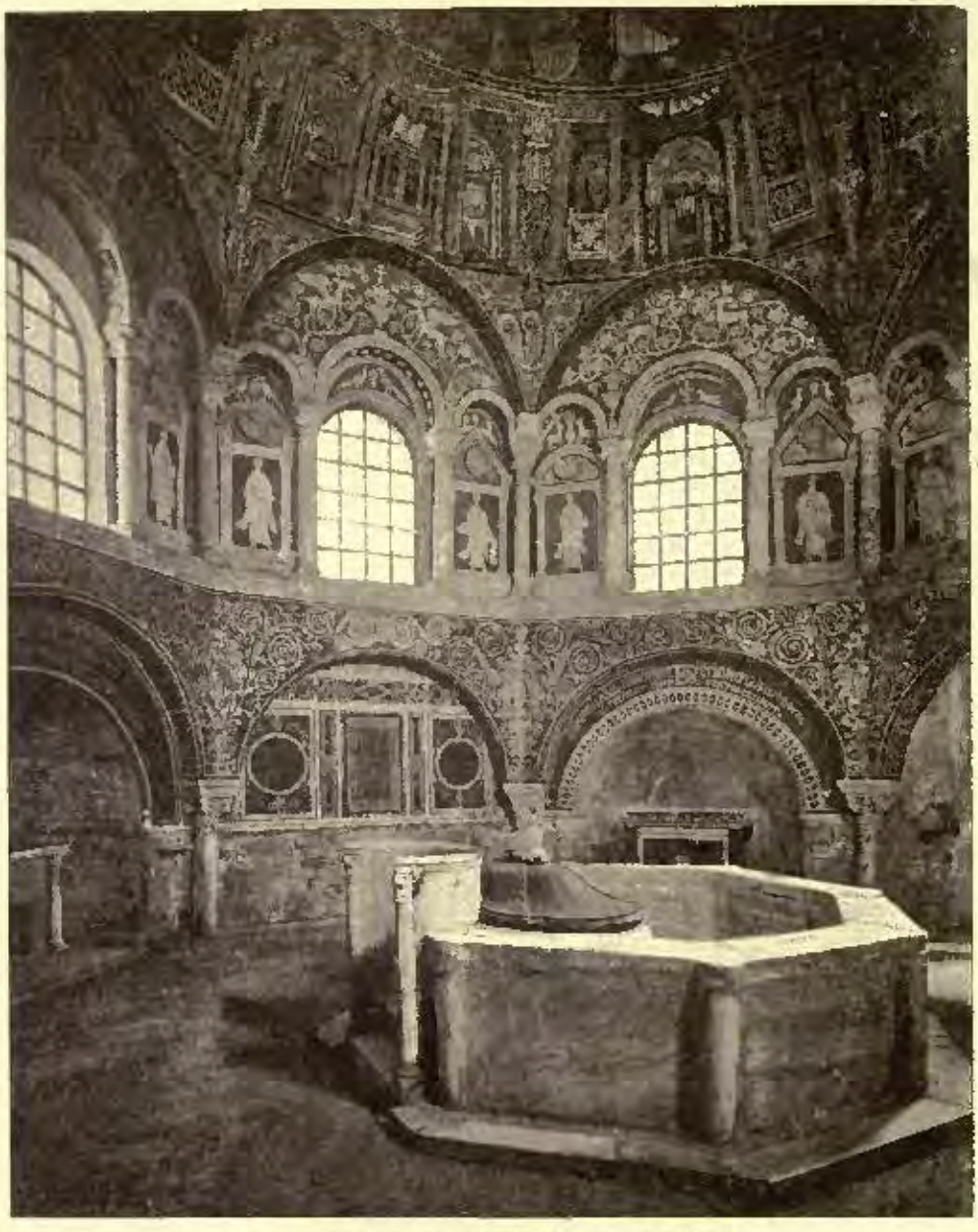


Fig. 55.—Ravenna, Baptistery of Neon (449 or 458–477).

spherical dome starts. It is composed of a double spiral of terra-cotta tubes fitting into one another and embedded in mortar, and rests on triangular spherical pendentives, which, in a horizontal section, follow the curve of the cupola. Its lightness allowed the architect to reduce the walls of the drum to the very moderate thickness of 2 ft. 2 ins. On the outside the walls, with courses of brickwork, separated by layers of mortar

of varying thickness, present high up on each face four large corbel arches, divided into pairs by lesenas, and crowned by a saw-tooth cornice (Fig. 56).

The baptistery of Neon claims our attention by three important peculiarities.

The first is the dome, measuring about 37 ft. in diameter at the base. The ancient world affords no instance of so wide a vault constructed of tapering tubes. This method, peculiar to Ravenna, had not made its appearance previously, except in the case of the semi-domes of apses, as is shown by those of the Basilica Ursiana and of Sant' Agata at Ravenna.

The second feature is that of the dome resting on broad triangular pendentives of perfect form, constructed of courses of brickwork.

The third is the device of single arches, each of which serves to relieve a triplet of arches of unequal height, a motive which was employed in later times in the West as well as in the East.

THE CHURCH OF SAN FRANCESCO, begun in the year 450 by Archbishop Peter Chrysologus, and dedicated to St. Peter with the addition of "the Great," was finished by his successor, Neon. In 1261, it received the title of San Francesco.[1][2][3] A rebuilding, begun in 1793, spared only a portion of the original side walls, the crypt, and the bell-tower.

High up on the outside of the original south wall of the nave runs a large arched corbel course resting on simple terra-cotta brackets, and with a lesena marking off and dividing each pair from the next.

The crypt is a later addition, as the materials taken from older buildings which are used in its construction, testify. Its date must be the same as that of the campanile, that is to say, the first years of the XIth century, as we shall see when we come to Sant' Apollinare Nuovo, a period in which its Ionic capitals, the pulvins made to fit their places, the construction of the vaulting, and the wall piers of the crypt itself, find their proper place.

The campanile (Fig. 57) is not of the same date as the church. In fact, it was built at the expense of the south aisle. Its brickwork is different from that of the original parts of the church. Shafts which have come from elsewhere and every kind of pulvin are used in its windows.

Fig. 57.—Ravenna. San Francesco. Campanile (XIth Century).

* * *

When the impotence of Romulus Augustulus (475–476) and the valour of Odoacer 476–493) had brought about the extinction of the Western Empire and the creation of the first Kingdom of Italy, Ravenna, which since

[1] Tarlazzi, *op. cit.* [2] Rubeus, *Historiarum ravennatum, &c.* [3] Fabri, *op. cit.*

Fig. 58.—Ravenna. Sant' Apollinare Nuovo (about 519).

the death of Valentinian III (455) had only afforded its craftsmen a restricted field of employment, was enabled to provide them afresh with a very wide one under the influence of Theodoric (493–526).

That illustrious ruler, who laboured so strenuously to make his kingdom appear as a continuation of the Roman Empire, embellished the capital of the Kingdom of Italy with remarkable buildings to whose splendour testimony is borne alike by the historians and by existing monuments. The most famous of these structures, the royal palace, the general appearance of which is represented on a mosaic in Sant' Apollinare Nuovo, a magnificent edifice surrounded by colonnades and adorned with the most precious marbles and mosaics, has disappeared. The building which now goes by the name of the Palace of Theodoric is a structure of later date, belonging, in all probability, to the early years of the VIIIth century. The buildings, however, which survive are sufficient to give an idea of the conditions of architecture at Ravenna in the days of Theodoric.

Fig. 59.—Constantinople. So-called Cistern of Arcadius (VIth Century).

THE BASILICA OF SANT' APOLLINARE NUOVO was erected by Theodoric about the year 519, and dedicated to St. Martin. Owing to its gilded ceiling it was known as "in

coelo aureo."[1][2][3] In the XVIth century, as it was sunk considerably below the surrounding level, the columns of the nave were raised and the arcades rebuilt.

It consists of a nave and two aisles, the former terminating in an apse which is not original. Externally the nave is decorated with blank arcades surmounted by a double saw-tooth cornice.

The bulky Corinthian capitals in the nave (Fig. 58), inscribed with masons' marks in Greek letters, and carrying pulvins of the Ravennate type, are Byzantine in style and to be ascribed to a Greek hand, an origin which would be confirmed by Fabri's[4] statement that Theodoric brought from the Greek capital the twenty-four columns intended for the nave of St. Martin's. They are closely related to those in the Cistern-basilica and in the so-called Cistern of Arcadius (Fig. 59) at Constantinople.

Fig. 60.—Ravenna. Sant' Apollinare Nuovo. Ambon (VIth Century).

Fig. 61.—Ravenna. Cathedral. Ambon of Archbishop Agnellus (VIth Century).

These capitals were not the only ones at Ravenna to be imported from the East in the reign of Theodoric. For they were Greek carvers who also produced the Composite capitals with protuberant foliage of the wild acanthus, boldly undercut so as to produce strong contrasts of light and shade, and pitted with an endless number of small holes made by the drill along the ribs of the leaves, four of which, bearing the monogram of

[1] *Mon. Germ. Hist.—Agnellus, Liber pontificalis.*

[2] Muratori, *Rerum Italicarum scriptores.* — *Spicilegium ravennatis historiae.*

[3] Tarlazzi, *op. cit.*

[4] *Op. cit.*

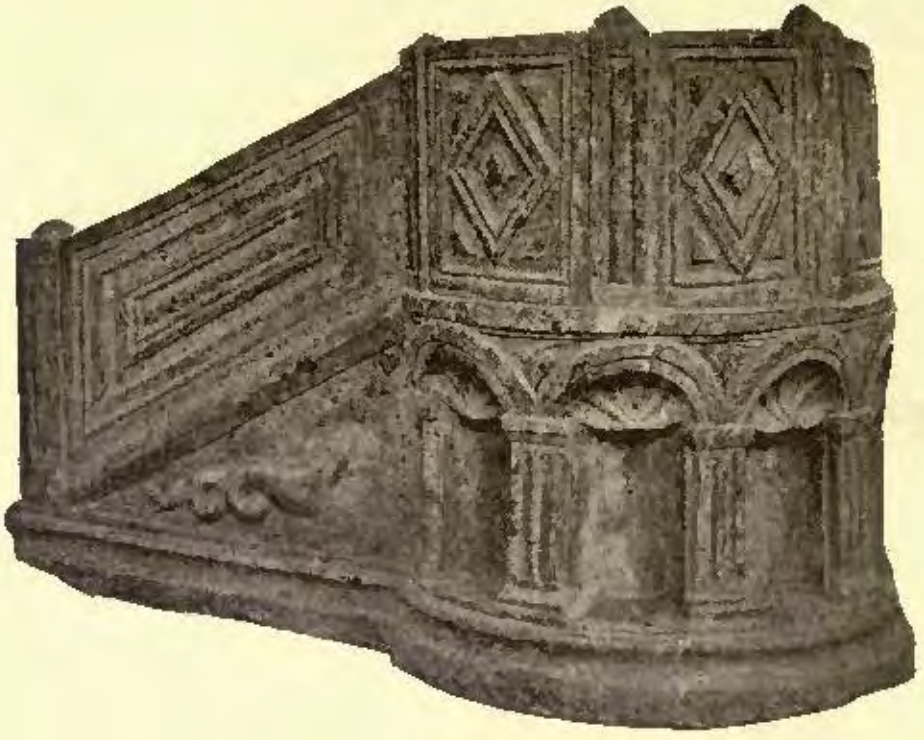


Fig. 62.—Salonica. St. Sophia. Ambon (about 495).

Fig. 63.—Constantinople. St. Sophia. Screen (532–537).

Theodoric, may be noticed in the ancient colonnade in the Piazza Vittorio Emanuele II.

To a Greek chisel must also be ascribed the old ambon of Sant' Apollinare Nuovo (Fig. 60), the panels of which do not exhibit the favourite motive of the carvers of Ravenna for enriching liturgical furniture of this sort, viz. squares with figures of saints, animals, birds, and fishes (Fig. 61), but only crosses standing on discs, a design sometimes used at Rome in mosaics, as may be seen in Santa Sabina (Vth century), and also lozenges with flowers at the angles.

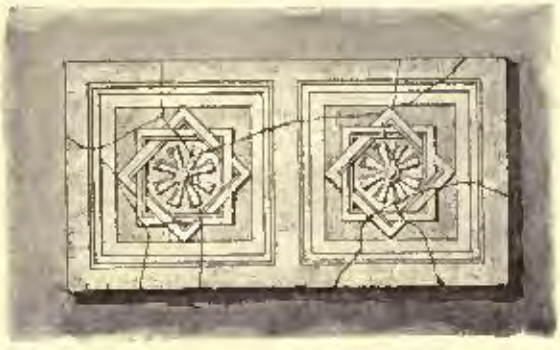


Fig. 64.—Rome. Crypt of St. Peter's. Pluteus (IVth Century).

The Byzantines preferred to ornament their ambons with niches occupied by human figures after the fashion of the two fragments from Salonica, now in the Imperial Museum at Constantinople, belonging to the IVth century. Or else they decorated them with empty niches, lozenges, crosses, and monsters, as may be seen on the ambon of St. Sophia at Salonica (about 495) (Fig. 62). They rarely made use, under Ravennate influence, of squares containing fishes, birds, animals, or other representations, except in the case of screens such as that still standing in the women's gallery of St. Sophia at Constantinople (532–537) (Fig. 63). In this screen the aforesaid representations have been almost erased, probably after the Turkish conquest.

The typical ornamental treatment of the ambon of Sant' Apollinare Nuovo is of Byzantine origin, and the taste and workmanship displayed are just like those of the parapets of the matroneum of St. Sophia at Constantinople. It shows a distinct advance beyond those of the upper gallery of St. Demetrius at Salonica (Vth century). Afterwards it spread through Italy. In the time of Pope John II (533–535) it was used in the low screens of the choir and presbytery in San Clemente at Rome, where it takes the form of framed panels enclosing lozenges, stars with eight points, discs each of which contains a cross, and also the monogram of the Pope surrounded by a wreath. The stars recall the Roman motive of a star formed by two interlacing squares with a conventional flower in the centre, an example of which exists in a *pluteus* (IVth century) in the Vatican "Grotte" (Fig. 64), one of those which once

Fig. 65.—Rome. San Clemente. Capital of the time of Hormisdas (514–523).

Fig. 66.—Ravenna. Sant' Apollinare Nuovo. Campanile (850–878).

connected the pedestals of the vine-wreathed columns before the Confession in St. Peter's.[1]

These low screens, the work of a Roman or Ravennate hand, are not to be confused as to either date or authorship with the *transennae* of basket-work design, also to be seen in San Clemente. These latter, together with an inscribed epistyle, a fragment of architrave carved with vine-branches, foliage, and bead and reel ornament, and two small columns once belonging to the altar erected in the time of Pope Hormisdas (514–523), decorated with twining ivy and surmounted by basket-shaped capitals (Fig. 65), and closely related to capitals in St. Demetrius at Salonica, the Duomo of Parenzo (535–543), and St. Sophia at Constantinople, must be attributed to Greek carvers on account both of the designs which are characteristic of that school, and also of the technique peculiar to it in the VIth century. To an Eastern chisel must also be assigned a Composite Byzantine capital in Santa Maria in Cosmedin at Rome, founded at the beginning of the VIth century.

But if the craftsmen who carved the capitals and the ambon of Sant' Apollinare Nuovo were Greeks, its masonry and the characteristic decoration of blank arcading show that its architects and builders belonged to Ravenna.

The round campanile (Fig. 66) with its wooden roof, rising in front of the right aisle of the church, has the shafts (taken from older buildings) of its double and triple openings surmounted by plain pulvins, presenting a cross between leaves, or else ornamented with small capitals of the open lotus flower, or, again, with capitals the angles of which are hollowed out. One of the pulvins bears a Latin monogram which, after examination *in situ*, I interpret *Iohannes* (fig. 67), for, among other reasons, in such monograms the two most striking letters (here I and O) often indicate the whole name. Built into the spandrels of the arches of the third tier of openings counting from the top, towards the south-east are terra-cotta bowls ("ciotole") (fig. 68). This is the oldest specimen to my knowledge of window open-

Fig. 67.—Ravenna. Sant' Apollinare Nuovo. Campanile. Monogram of Johannes from a rubbing (850–878).

[1] Sarti e Settele, *De Vaticani cryptis.—Appendix.*

ings decorated in this manner. It was inherited by the Lombard gilds, and by the Greek builders who in the XIth century employed it in St. Theodore at Athens (1049).

The tower was not built at the same time as the rest of the church, a fact revealed not only by the walls, which show courses of brickwork thinner, and layers of mortar generally thicker, than those of the church itself; but also by the fragmentary nature of the materials used in it. If this be so, to what period ought we to ascribe it? The answer is, the IXth century, and, more precisely, the episcopate of John, who filled the see from 850 to 878, and, according to Gams,[1] was the tenth of the name, though if we follow the chronology of Giani,[2] he was only the eighth. The history of the church is intimately connected with this prelate on account of his having translated, or, to be more accurate, made it appear that he had translated, the body of the patron saint, about the year 856, from Sant' Apollinare in Classe outside Ravenna to the present church, in order to put it out of reach of the raids of the Saracens, who penetrated into the Adriatic in 829, and had already plundered the church of Classis of its rich ornaments and treasures. In consequence of this translation, the church began to be designated Sant' Apollinare Nuovo.[3] So that the monogram which we noticed above should in all probability be referred to this prelate, and will give the date of the campanile.

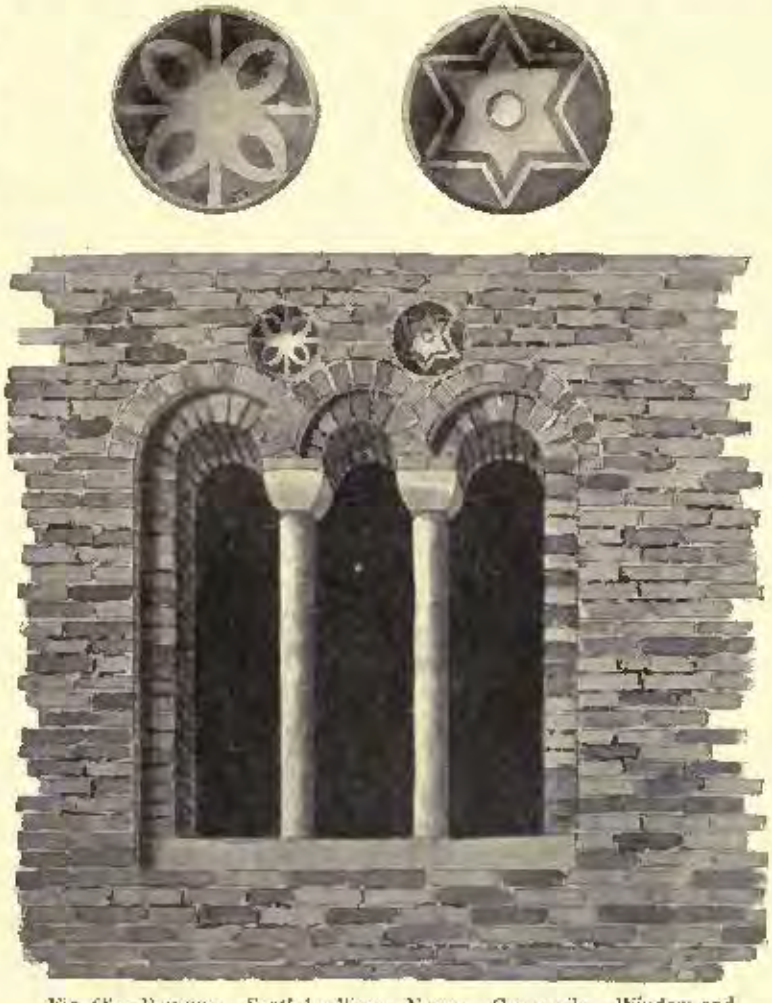


Fig. 68.—Ravenna. Sant' Apollinare Nuovo. Campanile. Window and "Clotole" (850–878).

The age of this tower being practically certain, we are in a position, by the help of legitimate inference and mutual comparison, to fix more accurately than has hitherto been done the dates of the other ancient bell-towers at Ravenna, all of them later in origin than the churches to which they belong. This statement is based on the

[1] *Op. cit.* [2] *Op. cit.* [3] Fabri, *op. cit.*

fact that the masonry of all these churches of the Vth and VIth centuries (except San Vitale) is not of the same date as that of the towers belonging to them; and that the towers of San Vitale, though contemporary with the church, were erected in order to provide access to the galleries, and not to hold the bells.

The oldest churches constructed by the builders of Ravenna in the Romano-Ravennate or Byzantino-Ravennate styles, had no large bell-tower attached to them. This is proved by the cathedrals of Parenzo (535–543) and Grado (571–586), which at the time of their original erection were clearly without such adjuncts. It is also confirmed by San Vitale at Ravenna (526–547), where the towers were built to hold stairs; by San Lorenzo at Milan (VIth century), where the four angle towers were erected for purposes of communication, and also for constructive reasons; and by Santa Maria at Pomposa (VIth century), where the original tower was merely a lighthouse. I note here that the towers belonging to the façades of San Vitale and San Lorenzo Maggiore may have been suggested by the staircase towers in the façades of Roman Baths such as those of Agrippa rebuilt by Hadrian (120–124), or those of Nero remodelled by Alexander Severus (about 228), or lastly those of Titus (80). In any case there was no occasion for their builders to trouble themselves to look for ideas in the East, for instance in St. Sophia at Salonica (about 495), where the narthex was flanked by a staircase tower on the north-west, at a later date increased in height.

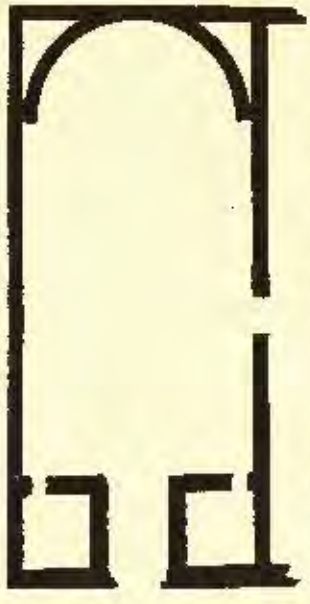


Fig. 69.—Rome. Plan of the Secretarium Senatus (284–305).

It is quite true that the liturgical use of bells is of great antiquity, going back at least to the Vth century; but at first they were hung in modest erections of masonry or woodwork, only just rising above the roofs of the churches and built up from the main walls. The origins of the great bell-towers of square or circular plan do not go back to such a remote period as most people fancy.

The Greek churches were without them as late as the division of the Empire (1204). Moreover, it seems that the use of bells did not begin among them till after a number were sent by the Doge of Venice, Orso Partecipazio, to the Emperor Basil I (867–886) some time between 877 and 881: "Dominus quidem Ursus dux efflagitante Basilio imperatore eo tempore XII campanas Constantinopolim misit, quas imperator in ecclesia noviter ab eo constructa posuit, et ex tempore illo Greci campanas habere ceperunt."[1] Their use cannot have been widely extended, seeing that at Constantinople in 1200 St. Sophia itself was without them: "On n'a pas de cloches à Sainte-Sophie, mais un petit battoir hagiosidère à la main avec lequel on frappe pour les matines . . . . c'est d'après les préceptes de l'ange qu'ils ont ce battoir."[2]

If, again, Syria provides very early examples of churches with one or two large square towers, either incorporated with the façade or flanking the aisles, as in the basilica of Tafkha (IVth and Vth centuries), and the churches of Turmanin (VIIth century) and Kalb-Lauzeh (VIth century), in which the narthex is confined

[1] *Mon. Germ. Hist.*—*Johannis Diaconi chronicon Venetum et Gradense.*

[2] De Khitrowo, *Itinéraires russes en Orient.*—*Antoine archev. de Novgorod, Description des Lieux Saints de Constantinople* (1200).

between the towers as at Sant' Apollinare in Classe (533–549), such towers were not intended for bells, but for purposes of communication, and contained staircases. Communication was also the object of the constructions which close the narthexes

Fig. 70.—Baalbeck. Ruins of Temples (IInd and IIIrd Centuries).

of some of the churches at Binbir-kilisse, the dates assigned to which by Strzygowski [1] are wrong.[2] [3] Possibly even, some of these constructions were not necessarily towers but simple chambers, as appears to be the case in the "Secretarium Senatus" in the Curia of Diocletian at Rome [4] [5] (fig. 69).

[1] *Kleinasien.*

[2] Ramsay, *Studies in the History and Art of the Eastern Provinces of the Roman Empire.—Report on Exploration in Phrygia and Lycaonia.*

[3] *Revue Archéologique*, 1906, 1907.—Bell, *Notes on a Journey through Cilicia and Lycaonia.*

[4] Lanciani, *Forma Urbis Romae.*

[5] Hülsen, *Il Foro Romano.*

It was the Latins who introduced lofty bell-towers and bells into Syria. Mariti[1] gives King Godfrey de Bouillon (1099–1100) the credit of the first introduction of the latter into Jerusalem, and furnishes interesting information about their use in the Eastern Church and among the Christians of other denominations subject to Moslem rule.

In those countries the scheme of a church façade with towers is connected with and is a survival of a pagan idea of which the imposing ruins of Baalbeck offer remarkable examples. Thus the Propylæa of the largest temple of Heliopolis, that of Jupiter, are flanked by two towers, the remains of which exist, which originally hardly rose above the height of the pediment of the archway of the Propylæa. The temple of Bacchus (the dedication of which is revealed by the sculptured representations on the flight of steps in the elevated sanctuary, below which is a corridor or crypt with a barrel vault) has a façade with two towers taken out of the angles of the building, and containing stairs which give access to the roof. The chronicler John Malalas[2] states that the great temple of Jupiter was built by Antoninus Pius (138–161). "He built at Heliopolis a great temple of Jupiter which was a marvel." But the erection of a group of buildings of this magnitude (fig. 70) must have taken too long a time for us to be able to accept the statement without some confirmation. On the other hand, it is far more probable that the works carried out by him were confined to the temple properly so called; and that the great square court, the hexagonal court with the Propylæa leading to it, and also the temple of Bacchus, were erected by his successors, especially, to judge from the coins, Septimius Severus (193–211), Caracalla (212–217), under whom a well-known inscription tells us that the

Fig. 71.—Coin of Caracalla (212–227).

Fig. 72.—Coin of Philip the Arabian (244–249).

Fig. 73.—Coin of Otacilia (244–249).

Propylæa were in course of construction, and Philip the Arabian (244–249), all of whom gave themselves credit therefor on the coins of the Colonia Heliopolitana. The works must have been finished under the last emperor, for while a coin of Caracalla (fig. 71) struck at Abila, mentioned by De Saulcy,[3] bears on the reverse a hexastyle temple flanked by two battlemented towers (which proves that in his reign some great temples were flanked with such towers, both for decorative reasons and as staircases), two coins of Philip (fig. 72) and of his wife Otacilia (fig. 73) show instead the Propylæa and its towers with a flight of steps leading up to it.

[1] *Viaggi per l'isole di Cipro e per la Soria e Palestina.* [2] *Corpus script. hist. byz.—Chronographia.*
[3] *Numismatique de la Terre-Sainte.*

The history gathered from the coins is confirmed by the story told by the sculptures to an eye trained in such matters. These sculptures inform us that the temple of Bacchus is later in date than that of Jupiter; and further, that the great square court of the latter is more recent by some years than the temple to which it gives access, for we find in it the motive of acanthus leaves with their tips arching over. The same feature may be noticed on the capitals of what is believed to be the temple of Venus (Fig. 74) close by, and enables us to fix its date at the end of the IInd or the beginning of the IIIrd century, in other words, in the reign of Septimus Severus. A remarkable example of it is also afforded by the remains of the famous colonnades of Palmyra (about IIIrd century) (Fig. 75)

Fig. 74.—Baalbeck. Supposed Temple of Venus (IInd or IIIrd Century).

which exhibit capitals the exact counterparts of those in the temples of Bacchus and Venus at Baalbeck. Again, in North Africa, the scheme of the church façade with staircase towers (*e.g.* the great basilica of Morsott in Algeria) was suggested by pagan prototypes. The mosaics, in particular, discovered in the Roman villa of El-Alia belonging to the IInd century, and now transferred to the Bardo Museum at Tunis, represent villas flanked by towers which contained the state apartments of the building (Fig. 76).

The use of bell-towers in the façades of Western churches, on the other hand, began, so far as we can infer from the monuments, if not with the front of the atrium of the Constantinian church of St. Peter at Rome, provided with two towers by Popes Stephen II (752–757) and Hadrian I (772–795), then with St. John Lateran, the northern façade of which was decorated from early times with two bell-turrets continuing the already existing staircase towers. Or it may have come from the church of St. Martin at Tours in the reign of Charles the Simple (893–929),

which, to judge by the representation on a coin of his period, was provided with a central tower surmounted by a cross, and two towers in the façade.

As bearing on such towers, I mention in passing that the Senate House (Curia) of Diocletian, belonging to the first years of the IVth century,[1] was designed with two of these adjuncts for purposes of communication, a fact which anyone can still verify.

It was quite in the natural order of things that to Italy should be assigned the task of diffusing as from a centre the conception of façade bell-towers—Italy, the birthplace of the great campaniles, forming part of the structure of a church or rising close beside it. In the forefront stand the tower of Santa Maria della

Fig. 75.—Palmyra. Ruins of Colonnades (about IIIrd Century).

Cella at Viterbo (IXth century), and the "Torre dei Monaci" of Sant' Ambrogio at Milan (789–824). If earlier examples are adduced, the dates assigned to them are arbitrary. Thus, for instance, the great bell-tower which rises beside Santa Maria Maggiore at Naples, founded by Bishop Pomponius (514–532),[2] with its brick construction (except in its lowest portion, where fragmentary materials have been used) and high pyramidal roof also of brick, and its four one-light round-headed windows, the bell-chamber having four two-light openings, one of which has been walled up, is certainly not to be assigned to the beginning of the VIth century and the agency of that prelate, as some imagine,[3] but was built after the year 1000. As a matter of fact the material of which the Vth and VIth century ecclesiastical buildings of Naples were constructed was not brick, but tufa with brick courses, as

[1] Hülsen, *Die ausgrabungen auf dem Forum Romanum*, 1902–1904.
[2] *Mon. Germ. Hist.*—*Gesta episcoporum Neapolitanorum.*
[3] *Napoli nobilissima*, 1893.—Croce, *Sommario critico della storia dell' arte nel Napoletano.*

in the arcaded apses of San Giorgio Maggiore (367 and about 387) and San Giovanni Maggiore (554–577). In addition to which, the tall pyramidal roofs made of masonry did not make their appearance, so far as I am aware, before the XIth century. And the typical corbel pulvins of the two-light openings (that is, pulvins corbelled out to correspond in length to the thickness of the wall) did not come into use before the beginning of the second half of the Xth century, as we shall see when we come to deal with the Cathedral of Ivrea (973–1001 or 1002). Lastly, the three small capitals, made expressly for the tower of Santa Maria Maggiore, which carry these corbel pulvins, are products of the artistic revival of the early XIth century. One need only look at the two imitations of the simplest form of Roman Composite capital, with the characteristic central leaf, stiff and terminating in a sharp point, in order to convince oneself of the fact.

Fig. 76.—Tunis. Bardo Museum. Mosaic from a Roman Villa (IInd Century).

We have still, it is true, to reckon with De Rossi's statement that, as early as the first half of the Vth century, ecclesiastical basilicas had bell-towers connected with the front or in the rear of the building; but we are very much afraid that in this case the eminent Roman archaeologist was wrong.[1][2] What indeed are we to say of the buildings encircled by a wall with towers, portrayed on the triumphal arch of Santa Maria Maggiore at Rome, and representing Jerusalem, in which De Rossi saw a basilica with its circular baptistery, and high bell-towers behind and at the side; as well as a second basilica with a similar tower flanking the façade? Whereas, in fact, there is nothing more than a fanciful group of buildings, two out of the three towers referred to belonging to the encircling wall, where at the most one might identify Constantine's "Martyrion" with its three doors, and the "Anastasis" beside it. And what are we to think of the so-called Temple of Jerusalem under the form of a Christian Church, with a cross on its front between two bell-towers, to be seen on one of the carved panels of the well-known and not less discussed doors of Santa Sabina at Rome, a church which De Rossi himself says[3] was begun by Pope Celestine I (422–432) and finished under Xystus III, while Lanciani[4] gives 425 as the date of the building, and Grisar[5] refers the doors to the year 535? For what are the facts? A pair of towers placed behind the left side of a conventional church, and perhaps possessing some symbolical character, but certainly not

[1] *Bull. di arch. cristiana*, 1887,—*Campana con epigrafe dedicatoria del secolo in circa ottavo o nono, trovata presso Canino.* [2] *Musaici Cristiani delle chiese di Roma anteriori al secolo XV.*

[3] *Bull. di arch. cristiana*, 1887,—*Campana, &c.*

[4] *The Ruins and Excavations of Ancient Rome.* [5] *Analecta Romana.*

bell-towers, seeing that one of them has no opening in its upper part where the bell-chamber ought to be (Fig. 77).

But to return to the campanile of Sant' Apollinare Nuovo, let us see whether it will help us to fix with tolerable accuracy the dates of the others belonging to the ancient churches of Ravenna. We may, however, confine our examination to those of Sant' Apollinare in Classe, San Giovanni Evangelista, and San Francesco, and not without good reason. For the towers of the original Basilica Ursiana, of Sant' Agata, of SS. Giovanni e Paolo (the original structure of which is ascribed to the VIth century),[1] of San Giovanni Battista (a building of the Vth century, first consecrated by Peter Chrysologus and erected by Baduarius),[2] and of Santa Maria Maggiore (originally built between 521 and 534),[3] are not only all of later foundation, not one of them exhibiting in its oldest parts the masonry of large specially made bricks which is a feature of Vth and VIth century buildings at Ravenna, but moreover, owing to the alterations which they have undergone, or from their comparatively recent date, they would not contribute to the elucidation of the argument.

Fig. 77.—Rome. Santa Sabina. Panel of Door (VIth Century).

Above all, it is easy to see that the round form of tower at Sant' Apollinare Nuovo must necessarily have been that of the earliest bell-towers of Ravenna. The local builders in the VIth century had chosen that form for the characteristic staircase towers of San Vitale, and it was very natural that their successors should find in them the suggestion for the bell-towers of other churches. And this is what they actually did, in spite of the difficulties in the way of sound and exact construction in the case of a cylindrical tower, not to speak of those connected with the insertion of the numerous openings necessary to let out the sound of the bells, and the fixing of the frames to hold the bells themselves, and with complete disregard of the very imperfect connection and harmony subsisting between towers of this shape and the rectilineal forms of the church façades to which they are attached. But this was the way in which the campanile of Sant' Apollinare arose, and the later ones were made after its likeness.

Next in chronological order to the tower of Sant' Apollinare Nuovo comes that of Sant' Apollinare in Classe. The materials of its construction are, like that of the last, fragmentary; and its pulvins, specially made for their places, as well as the use of double recessed arches in the heads of the three-light openings, make one think at first sight that they are contemporary. The masonry, however, shows that they do not belong to the same date; and the band of bricks in two colours arranged like *opus reticulatum*, which ornaments the lower part of the Campanile of Sant' Apollinare in Classe, points to a later period, when the art of decorating these towers had been

[1] Fabri, *op. cit.*

[2] *Mon. Germ. Hist.*—Agnellus, *Liber pontificalis.*

[3] Tarlazzi, *op. cit.*

developed. Its foundation, then, must be referred to a time subsequent to the expulsion of the Saracens from Bari (871), or, more precisely, to the last years of the IXth century.

The towers of San Giovanni Evangelista and San Francesco come next in order. The square tower, which avoided the inconveniences connected with the round form, and tends to produce a line which, artistically, is considered much purer, though chosen by the Lombard gilds for their great bell-towers from about the end of the VIIIth century onwards, was evidently only adopted with reluctance by the builders of Ravenna. Tradition was the great obstacle to change. It was only brought about, after those gilds had first created the prototype of the Lombardic campanile, in the majestic bell-tower of San Satiro at Milan (876), in my belief the oldest example of such a structure with the beginnings of a definite architectural design.

The two towers in question should, then, be ascribed to a date later than the year 876. That of San Giovanni Evangelista was probably begun after the erection of the campanile of Sant' Apollinare in Classe, because we do not find in it the local fashions of the round towers of earlier date, and also on account of the presence of carving which indicates a time near the year 1000. Finally, though not later than the first years of the XIth century, seeing that in 1063 a campanile in the most elaborate Lombardic fashion had already made its appearance at the neighbouring abbey of Pomposa (VIth century)—and the presumption is that one of a much simpler and more primitive style would not have been built at Ravenna if only separated from the latter by a few years interval—rose the campanile of San Francesco which, with the bands which frame it, and the lesenas merging in an arched corbel course at the top, proclaims the Lombardic style and marks an artistic progress beyond the tower of San Giovanni Evangelista. It must, then, be some years later, and consequently will belong to the beginning of the XIth century.

THE MAUSOLEUM OF THEODORIC was erected by order of the second King of Italy, in his own lifetime, about the year 519.[1][2] It is due, in all probability, to the architect Aloisus and the "marmorarius" Daniel, to whom there are such interesting references in Cassiodorus.[3]

It consists of two stories built of squared marble blocks laid without mortar, those which form the voussoirs of the arches having joggle joints (Fig. 78). The irregular adjustment of the blocks at the points of greatest pressure was intended to increase the stability of the walls, and enable them to meet the thrust of the cupola, it being well known that such irregularities resist any tendency towards dislocation of the parts, so that the masonry retains its cohesion perfectly against both outward thrust and vertical pressure.

The building rests on a platform of brick and stone set in mortar and cement ("pozzolana"). The lower story externally forms a decagon, and in each of its sides is recessed a niche of rectangular plan, with an arched head, except in the one which contains the square-headed doorway. Internally it has the shape of a cross with equal arms, and is lighted by loops.

The upper story, also forming a decagon, must originally have been decorated on nine of its outer faces by a sort of high canopies; not by a loggia or portico, encircling it in the manner imagined by Buonamici.[4] The tenth side is reserved, as

[1] *Mon. Germ. Hist.—Anonymi Valesiani pars posterior.*
[2] Muratori, *Rerum Ital. script.—Spicilegium Ravennatis historiae.*
[3] *Mon. Germ. Hist.—Variae.* [4] *Op. cit.*

in the lower story, for the door. Internally it is of circular shape, with very small windows, one of which is in the form of a cross.

The building is covered by a cupola consisting of a single piece of Istrian limestone, the circumference of which is provided with twelve handles, intended, without doubt, to lift by means of ropes and drop into its place this wonderful inverted basin.

Fig. 78.—Ravenna. Mausoleum of Theodoric (about 519).

I cannot imagine a more ingenious or more practical method of performing the operation.

It used to be supposed that upon these projections, on the outer faces of which are engraved the names of the four Evangelists and of eight of the Apostles, the corresponding statues were placed. But the saddle-backs of the projections are not suited for supporting statues, nor is there any trace of holes for the clamps which would have been necessary to fix them in place: not to speak of the fact that the inscriptions are obviously later than the time of the founder.

It has also been imagined that upon the summit of the cupola rested the porphyry sarcophagus of the great Gothic king. The only fact, however, that

is known about the coffin is that in the IXth century it was lying at the foot of the mausoleum.[1]

The designer of the tomb of Theodoric must have derived his inspiration from some Roman sepulchral edifice (we can catch from Ennodius[2] something of the atmosphere of Romanism which enveloped Theodoric himself) such as the one here illustrated in the ground plan of its lower story, as preserved by Bramantino[3] (Fig. 79). Or he may have followed the type of one of which Sangallo has left a sketch in his volume in the Vatican Library (Fig. 80). This would explain the remarkable ability displayed in its construction, and the well-proportioned relation of all its parts, which are so striking that some have thought that it belonged to the best age of architecture.

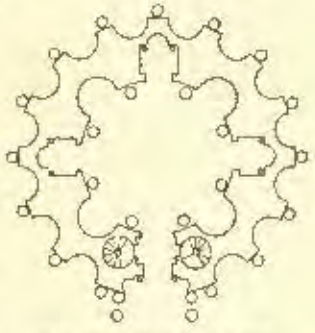


Fig. 79.—Plan of a Tomb near Rome.

Nevertheless, with the exception of the wonderful monolith cupola, measuring more than 30 ft. in diameter and about 1 ft. 4 in. in thickness, and also of the cornice-band carved with a characteristic meander, the mausoleum does not present a single new idea either in construction or decoration.

* * *

The impulse given to the arts by Theodoric was bound to produce new and abundant results. In fact, after his death, first of all and mainly during the regency

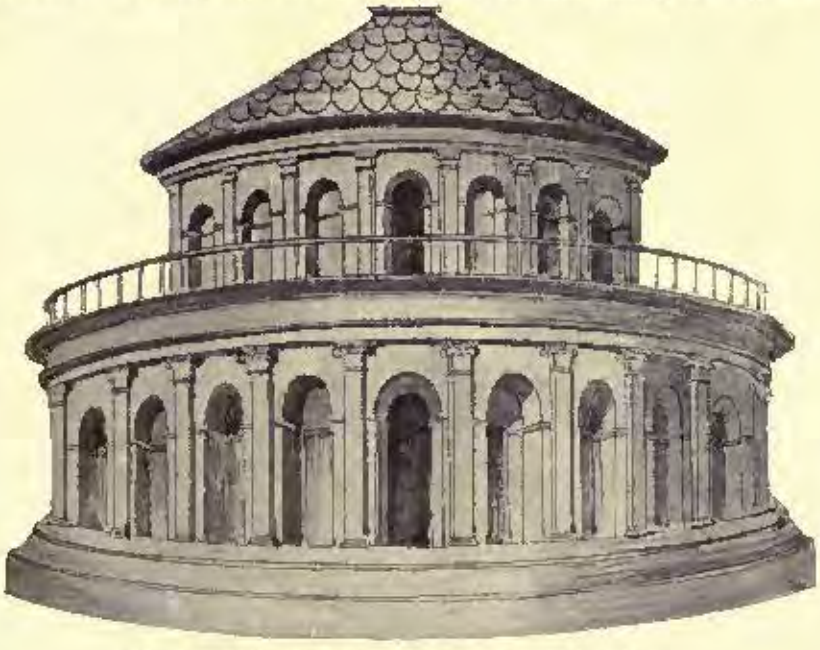


Fig. 80.—Santa Maria Capua Vetere. Roman Mausoleum.

of the able and intelligent Amalasuintha (526–535), and afterwards in the reigns of Theodahad (534–536) and Vitiges (536–540), we see the erection of the most important

[1] *Mon. Germ. Hist.*—*Agnellus, Liber pontificalis.*

[2] *Mon. Germ. Hist.*—*Magni Felicis Ennodi opera.*

[3] Mongeri, *op. cit.*

ecclesiastical buildings which the Italian peninsula can show in the VIth century: San Vitale at Ravenna, San Lorenzo at Milan, Sant' Apollinare at Classis, and the cathedral of Parenzo.

These buildings belong to two distinct styles, the Romano-Ravennate, with which we have already made acquaintance, and the Byzantino-Ravennate. It has, indeed, been the general practice to give Byzantine builders the credit of all these structures. But, as we shall see presently, the actual buildings are there to prove that Byzantine craftsmen either took no part in the erection of the churches we have just mentioned, any more than they did in the case of buildings of less importance, though always interesting for the history of art, such as San Vittore at Ravenna, the abbey church of Pomposa, the parish church of Bagnacavallo, and the cathedral and the church of Santa Maria delle Grazie at Grado, all of them Italian works of the second half of the VIth century, or else were employed merely in the capacities of carvers and mosaic-workers.

THE CHURCH OF SAN VITALE AT RAVENNA.—The erection was entrusted to Julianus Argentarius by Archbishop Ecclesius (522–532) after his return from Constantinople (525), whither he had been sent (524) by Theodoric, together with Pope John I (523–526) and other bishops[1]—in other words in the year 526. "Incoatio vero haedificationis ecclesiae parata est ab Iuliano, postquam reversus est praedictus Ecclesius pontifex cum Iohanne papa Romam de Constantinopoli...."[2] The founder, then, was not Justinian. If he had been, the fact would surely have been mentioned by Procopius.

Fig. 81.—Ravenna. San Vitale (526–547).

The building was not finished till after the surrender of Ravenna to Belisarius (540), and it was consecrated by Archbishop Maximian (546–556) in 547. This took place under Imperial patronage, for we may be sure that it was the offerings of Justinian and Theodora which paid for the mosaic decorations of the sanctuary and, probably, for the construction of the vaulting over the aisle.

[1] Muratori, *Annali d'Italia.*
[2] *Mon. Germ. Hist.*—Agnellus, *Liber pontificalis.*

Its plan is that of a regular octagon. The interior (Fig. 81) is encircled by an aisle and gallery, interrupted by the presbytery, and supported by eight massive piers, the intervals between which, with the exception of the one opening into the chancel, are filled by semicircular exedras with open arcades, after the fashion of the arcaded apses of the early Christian period, as in the church of San Sebastiano outside the walls of Rome (366–384) and the Basilica Severiana at Naples (367 and about 387). Above the piers rises the central conical dome carried at the angles by pendentives shaped as niches (Fig. 82), which enable the central octagon to pass into the circular drum which forms the base of the dome itself. The latter is masked externally by the walls of the drum which rise above it.

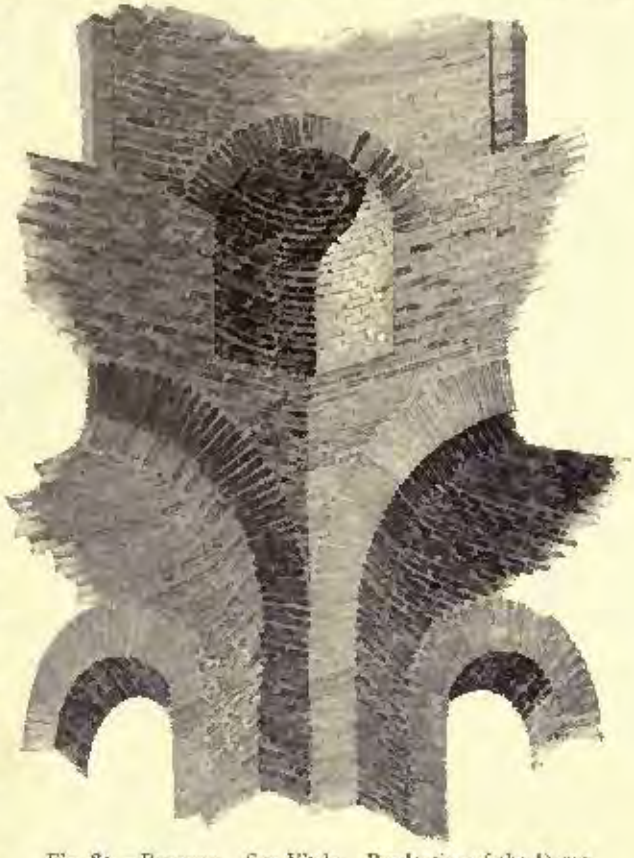


Fig. 82.—Ravenna. San Vitale. Pendentive of the Dome (526–547).

The aisle and gallery are covered with cross vaults. In the latter may be seen the transverse arches connecting the piers which carry the dome with the internal buttresses at the angles of the building. The vaulting of the aisle below is not of a piece with the rest of the structure, but was added to replace the original wooden ceiling, probably before the works were finished, for the vaulting of the ground floor is constructed of the same materials and in the same manner as the rest of the building.

The deep apse, curvilinear internally and semi-hexagonal externally, is flanked by two chambers ending in niches, and by two sacristies with rectangular projections. The presbytery is covered by a raised cross vault ("crociera di sesto rialzato"), concave-crowned, *i.e.* ending in a kind of cap ("calotta"). The object of this arrangement, of which we have met with no instance earlier than San Vitale, was to relieve the pressure of the vault, and at the same time to strengthen it in its weakest point, and provide a better surface for the display of the mosaics which form its decoration.

Opposite to the apse there opened originally an imposing rectangular narthex with semicircular exedras facing one another at either end, after the Roman fashion. Only its shell has been preserved. In contact with it were two round towers, one of which still retains its conical vault, constructed in exactly the same way as the dome of the mausoleum of Galla Placidia. They contained the spiral stairs which formed the communication between the vestibule and the gallery. In later times one of them was built higher in order to turn it into a bell-tower: the other still retains

its form though deprived of its stairs. The narthex was approached through an atrium or cloistered fore-court.

The building is entirely constructed of brick. The walls, which at the base have a thickness of about 3 ft., are formed of courses of large bricks separated by layers of mortar of varying thickness, and finished at the top by a saw-tooth cornice. A similar cornice marks the division between the two stories of the interior. Substantial buttresses, measuring about 4 ft. × 5 ft., at the outer angles of the walls, strengthen the internal ones, and receive the last thrust of the transverse arches which help to

Fig. 83.—Ravenna. San Vitale (526–547).

keep the piers of the dome in place. These buttresses, between which are lesenas of about 1 ft. × 3 ft. running right up to the top of the wall, like those that survive in the neighbouring church of Santa Croce (about 449), and interrupting the eaves-cornice, not only increase the stability of the outer wall, but also have a decorative purpose (Fig. 83). Two bracket-like projections stand out at the angles of the wall above the apse and below the pediment; a decorative feature which cannot be paralleled in any building earlier than San Vitale. It is a characteristic motive of the Romano-Ravennate and Byzantino-Ravennate styles of the VIth century.

The dome is constructed of two concentric rows of terra-cotta tubes, fitted one into the other and embedded in mortar, which extend in a spiral form up to the crown. Its curve, the presence of the spirals, each coil of which resists the thrust of those above it, and, lastly, the fact that the method of construction makes it a

homogeneous mass, result in the pressure being almost entirely vertical. This pressure being relieved by the peculiar material employed, the builders have been able to reduce the sustaining walls to a very moderate thickness; and the walls themselves, as we have mentioned, are raised higher than the base of the dome in order to give them additional weight and provide more resistance to the thrust of the dome itself.

Fig. 84.—Ravenna. San Vitale. Capital (526–547).

The dome is protected nowadays by a pyramidal wooden roof, which is not of any great age. The original roof was perhaps formed of a framework of rafters and boards covered with thick and broad sheets of lead, like the roof over the vault of the apse in the old Basilica Ursiana at Ravenna.

At first the church was lighted by very large, round-headed, unsplayed windows. Those which appear on the eight sides of the drum are in every case framed in an arch recessed within an outer one, which has a decorative purpose. There is also a large window divided into three lights by small piers carrying pulvins of the Ravennate type, the whole enclosed by a large arch formed below the pediment of the eastern end of the church.

Fig. 85.—Ravenna. San Vitale. Capital (526–547).

In the five free sides (*i.e.* those which do not correspond to the apse and the narthex) there opens a door relieved by a triangular arch.

In the interior, the columns on the ground floor stand on stepped bases, and are surmounted by cubical funnel-shaped capitals with the four sides slightly convex and elaborately carved, and carrying pulvins of the Ravennate type (Figs. 84, 85). There are also some Composite capitals, like those of the gallery. The capitals of the columns in the latter, on the other hand, are either Composite, supporting pulvins (Fig. 86), or else funnel-shaped capitals, or, lastly, those of the melon form (Fig. 87).

The cubical capitals of San Vitale were the first of their kind to be seen in Italy, and are the work of Greek chisels, as is shown by the Greek letters forming masons'

marks which appear on some of the pulvins and also on some of the columns of the ground floor.

The Byzantine cubical capital, of quadrangular funnel shape with convex sides and the angles rounded off, sometimes lobed like a melon, was modelled by the Byzantines partly on the Roman funnel-shaped cubical capital like those of the Porta Nigra at Trier (believed to belong to the second half of the IVth century, or, more precisely, to the reign of Valentinian I [364–373], under whom the city attained a new splendour),[1] and partly on the Ravennate pulvin; certainly not on a capital of the well-known Sassanid type from Ispahan (for which see Dieulafoy),[2] as some think, for the form in question has much closer affinity with the Gallo-Roman and Ravennate types referred to than with those of Persia. Its simplest form is to be seen in the cistern of Binbir-direk—"of the 1,001 columns"—at Constantinople (Fig. 88).

Fig. 86.—Ravenna. San Vitale. Capital (526–547).

Fig. 87.—Ravenna. San Vitale. Capital (526–547).

The principal forms derived from it are: (1) The simple funnel-shaped type, the earliest specimens of which are to be found in St. Sophia at Salonica (about 495), San Vitale at Ravenna (526–547), and SS. Sergius and Bacchus at Constantinople, founded after Justinian had assumed the Imperial diadem,[3] as is made clear by the inscription, consequently not before 527, that is to say at least a year later than the beginning of the works at San Vitale in Ravenna. (2) The funnel shape with volutes at the upper angles—a reminiscence of the Ionic capital. The earliest examples are found in St. Sophia at Constantinople (Fig. 89). (3) The melon shape, of which the prototypes are provided by St. Demetrius at Salonica (Vth century), San Vitale at Ravenna, and SS. Sergius and Bacchus at Constantinople (Fig. 90).

The Composite capitals in San Vitale, though they betray the Byzantine manner of the age of Justinian, are not inscribed with any Greek carvers' marks, and may be ascribed to Ravennate sculptors

[1] Browerus, *Antiquitates et Annales Trevirenses.* [2] *Op. cit.*

[3] *The Builder*, January 6, 1906.—Henderson, *SS. Sergius and Bacchus, Constantinople.*

imitating Eastern fashions. For when Italians, brought up in the local schools, wanted to produce capitals of the Byzantine kind, they were not servile imitators, but impressed a peculiar character on their work, together with a certain tendency towards the classical type. We shall not find it difficult to accept this statement when we examine the Corinthian capitals in the church of the Spirito Santo at Ravenna (Fig. 91), believed to be of the age of Theodoric;[1] others of the same sort in San Martino ai Monti at Rome, founded by Pope Symmachus (498–514) and completed by his successor Hormisdas (514–523);[2,3] and, lastly, those of the gallery

Fig. 88.—Constantinople. Cistern of Binbir-direk (VIth Century).

at the far end of San Lorenzo outside the walls of Rome, one of the results of the works of restoration carried out there by Pelagius II (579–590).[4]

It is the firmly rooted belief of most writers that San Vitale in its entirety, or nearly so, was the work of Byzantine builders. The plan of the church being quite new to Italy would support this idea, for a new style of architecture cannot spring by magic out of nothing; and, on the other hand, it is well known that the vaulted basilica of the central type took shape in the Greek Empire, and became the typical Eastern church, as being best suited to the Eastern character.

Nevertheless, in my opinion the course of things was somewhat different. The Byzantine vaulted basilica, as it appeared in the time of Justinian I (527–565), was the result of a gradual but tolerably rapid evolution. Choisy[6] locates its birthplace in the western part of Asia Minor, in Ionia. My belief, on the other hand, is that it originated in Macedonia, with the aid of some influence from Ravenna, and, more

[1] Tarlazzi, *op. cit.* [2] Duchesne, *Le liber pontificalis.*
[3] Marrucchi, *La scultura ornamentale romana nei bassi tempi.*
[4] *Bull. di arch. cristiana*, 1864.—De Rossi, *Le due basiliche di San Lorenzo nell' agro Verano.*
[6] *L'art de bâtir chez les Byzantins.*

precisely, at Salonica, which, even after the foundation of Constantinople (328), continued to be the real capital of Greece, Macedonia, and Illyria. Ionia can claim little more than the honour of having produced the two famous architects of St. Sophia at Constantinople as rebuilt by Justinian I in 532 and consecrated in 537,[1][2] that is to say, of the highest expression of the Byzantine style.

The first link in the chain which connects the Roman basilica system with the Byzantine is to be found in the church of Eski-Djuma at Salonica (Vth century).

Fig. 89.—Constantinople. St. Sophia (532-537).

Here are used Ionic capitals with pulvins, that is to say a pulvin of the Ravennate type supported at the angles by volutes intended to conceal the abruptness of the transition from the square of the pulvin to the round. This new Byzantine kind of capital, magnificent specimens of which are to be seen in the galleries of St. Sophia at Salonica (about 493) (Fig. 92), and in SS. Sergius and Bacchus (about 527) and St. Sophia at Constantinople (532-537) (Fig. 93), made its first appearance in this basilica of Eski-Djuma, and became a prominent feature of buildings of known date in other provinces of the Byzantine Empire, though only about the time of Justinian.

[1] *Corpus script. hist. byz.—Ioannis Zonarae epitomae historiarum.*

[2] *Mon. Germ. Hist.—Chronica minora*, Vol. II.—*Marcellini comitis chronicon.*

The second link is provided by the basilica of St. Demetrius at Salonica (Vth century), where quadrangular piers break the ranges of columns in the two stories. Here, too, three new types of capital are used for the first time: the cubical Byzantine melon form; the Byzantine Corinthian, with leaves blown by the wind in opposite directions; and the Byzantine bird and basket capital, derived from the Byzantine Composite with birds taking the place of volutes, which in its turn was derived from the Roman Composite capital with birds and animals supporting the abacus.

Fig. 92.—Constantinople. SS. Sergius and Bacchus. Capital (about 527).

The third link in the chain is the most important of all. Its age is no matter of hypothesis, like the churches of Koja Kalessi in Isauria and of the Trinity at Ephesus, themselves important monuments of the transition from the Roman to the Byzantine basilica, but has a date which may be regarded as certain on the strength of an inscription alluding to the decoration of the church. This link is to be found in the basilica of St. Sophia at Salonica (about 495), which, though reduced by a recent fire to the miserable condition that it presents to-day, retains enough to make it a monument of the very first rank, in which, as Choisy says,[1] "we find the typical structure summing up a whole system of methods, of which St. Sophia at Constantinople (532–537) offers the grandest and most perfect expression."

The whole building, with the exception of the gallery, which has a wooden ceiling, is covered with barrel, domical, and unraised vaults. The square space in the centre develops into an unraised, spherical dome, provided in its lowest part with a railed gangway, and resting on spherical pendentives. This is the earliest certainly-dated example in the Byzantine world of a dome of such size, supported on pendentives of this kind, constructed with courses of brickwork, belonging to different planes and curves.

The description just given makes it clear that in St. Sophia at Salonica Byzantine architecture reached its full development. In order, however, to arrive at St. Sophia of Constantinople, another link must be added to our chain, and we must look for it in

[1] *L'art de bâtir chez les Byzantins.*

a vaulted basilica, with aisles and galleries, and embodying the feature of exedras with open colonnades introduced in the space below the central dome. Such a con-

Fig. 91.—Ravenna. Spirito Santo. Capital (493–526).

Fig. 92.—Salonica. St. Sophia. Capital (about 495).

necting link is provided by San Vitale at Ravenna, begun, as we saw, at least a year before SS. Sergius and Bacchus.

The points which it has in common with St. Sophia at Salonica are the following. The women's gallery, originally designed with a wooden floor; the apse, semi-hexagonal externally, flanked by two sacristies ending in recesses which project beyond the main wall (Fig. 94); the line of the internal galleries indicated by a saw-tooth course on the exterior; and, lastly, the arcaded lower story.

Fig. 93.—Constantinople. St. Sophia (532–537).

Its author was undoubtedly Julianus Argentarius, who has been made to figure in every capacity—a prefect, a treasurer of the Church of Ravenna, a wealthy merchant, a banker, a money-changer, everything, in short, except his real character, viz. an architect of the first rank. The family of the Argentarii is mentioned in an inscription (cited

by Fabri[1] in his account of the church of San Zaccaria) from a tombstone of the time of the Emperor Tiberius Constantinus, *i.e.* Tiberius II (578-582), which records a "Georgius Argentarius filius Petri Argentarii." Peter and George must have belonged to the same family as Julian the architect. And he was not the first ecclesiastical architect of Ravenna; for, in the preceding century, the church of San Giovanni Battista, consecrated by Peter Chrysologus, had been built by one Baduarius: "Consecravitque etiam ecclesiam sancti Ioannis et Barbatiani quam Baduarius haedificavit."[2] Julian's profession of architect comes out in the following passages of Agnellus: "Incoatio vero haedificationis ecclesiae parata est ab Iuliano —ecclesia beati Vitalis martyris a Iuliano Argentario constructa est—Beati martyris Vitalis basilica, mandante Ecclesio viro beatissimo episcopo, a fundamentis Iulianus Argentarius aedificavit—Beati Apolenaris (basilicam) . . . mandante vero beatissimo Ursicino episcopo, a fundamentis Iulianus Argentarius aedificavit—Iussitque et ammonuit hic sanctus vir, ut ecclesiam beati Apolenaris ab Iuliano fundata et consummata fuisset." His recognised ability in this capacity was also recorded in a metrical couplet in silver mosaic letters in San Vitale, quoted by the same chronicler:

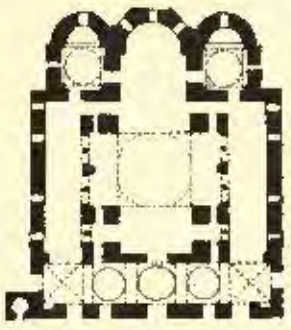


Fig. 94.—Salonica. Plan of St. Sophia (about 495).

Tradidit hanc primus Iuliano Ecclesius arcem,
Qui sibi commissum mire perfecit opus.

Others[3][4] have noticed these points before me, and have regarded Julian as an architect, or at least as having a knowledge of architecture, but have not adduced the ample proofs which I have furnished.

As a matter of fact the two churches designed by Julian betray a common authorship. The identity is revealed in the new feature of the characteristic bracket-like projections at the top of a wall. But, above all, it is shown by the systems of resistance adopted in order to counterbalance the principal internal thrusts, represented in San Vitale by the central dome, and in Sant' Apollinare in Classe by the great chancel arch.

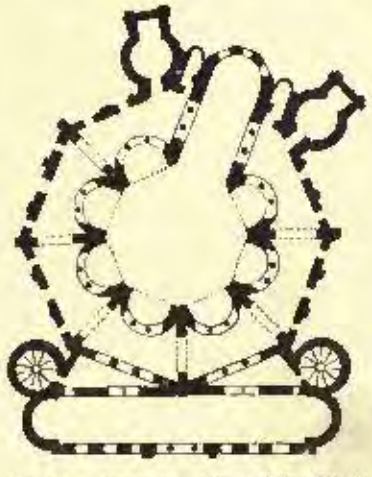


Fig. 95.—Ravenna. Plan of San Vitale (526-547).

From the beginning San Vitale was regarded as a wonderful building: "Nulla in Italia ecclesia similis est in aedificiis et in mechanicis operibus."[5] Without doubt Cassiodorus[6] had it and San Lorenzo Maggiore at Milan specially in mind when he praised the boldness and lightness of the new style of building: "Quid dicamus columnarum iunceam proceritatem? Moles illas sublimissimas fabricarum quasi quibusdam erectis hastilibus contineri et sub tanta aequalitate concavis canalibus excavatas, ut magis ipsas aestimes fuisse transfusas, ceris iudices factum, quod metallis durissimis

[1] *Op. cit.*
[2] *Mon. Germ. Hist.—Agnellus, Liber pontificalis.*
[3] Hübsch, *Die altchristlichen Kirchen nach den Baudenkmalen und ältern Beschreibungen.*
[4] Cappelletti, *Le chiese d'Italia.*
[5] *Mon. Germ. Hist.—Agnellus, Liber pontificalis.*
[6] *Mon. Germ. Hist.—Variae.*

videas expolitum, marmorum iuncturas venas dicas esse genitales, ubi dum falluntur oculi, laus probatur crevisse miraculis."

It was the result of suggestions taken from both Pagan and Christian monuments of Rome and Ravenna, and also from the East; and it presents characteristics which confer on it a claim to constitute a new style, the style which I describe as "Byzantino-Ravennate," and are sufficient to prove that not only its architect, but also its builders were Italians trained in the School of Ravenna.

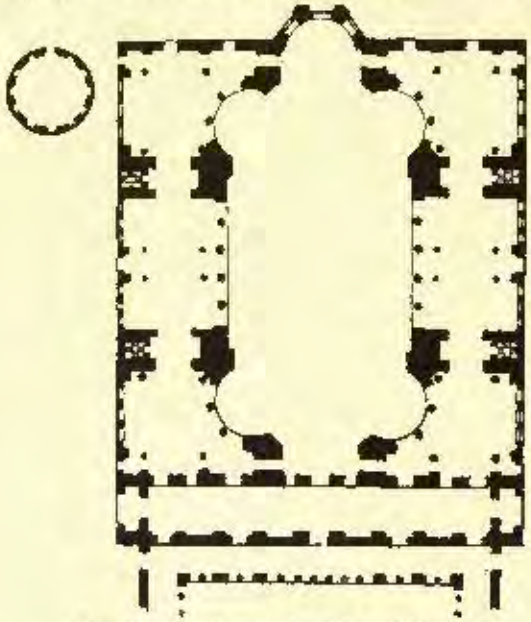


Fig. 96.—Constantinople. Plan of St. Sophia (532–537).

Coming to facts, it is, first and foremost, a very rare instance of a purely octagonal church (Fig. 95). In the case of the best known contemporary Byzantine churches still surviving, such as St. Sophia (Fig. 96) and SS. Sergius and Bacchus at Constantinople (Fig. 97), the octagon which carries the dome is combined with an external wall not of octagonal but of quadrangular form.

In the next place, the essential origin of its plan did not come from the great rectangular halls of the Roman Baths, nor from the Roman vaulted basilica, as is the case, for instance, with St. Sophia at Constantinople, the ground plan of which is supposed by some writers to have been a development from structures such as those shown here in plan (Figs. 98, 99). Whereas it has, in fact, a marked affinity with the plan of a hall in the Baths of Agrippa, rebuilt by Hadrian (120–124) (Fig. 100), and with another in the Baths of Nero, reconstructed by Alexander Severus (about 228) (Fig. 101),

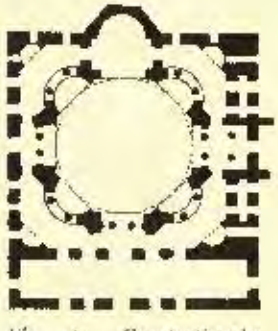


Fig. 97. — Constantinople. Plan of SS. Sergius and Bacchus (about 527).

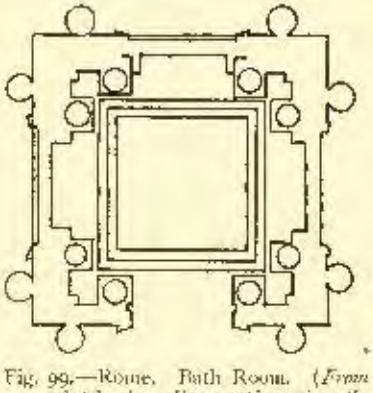


Fig. 99.—Rome. Bath Room. (*From a sketch by Bramantino in the Ambrosiana.*)

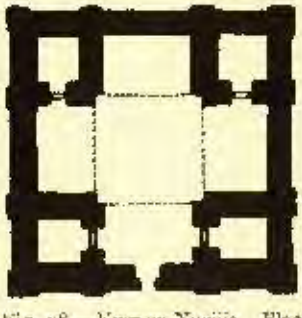


Fig. 98.—Kust en Nueijs. Plan of a Roman Tomb (IInd Century).

as well as with that of the "Basilica Nova" (Fig. 102), begun by Maxentius (310–312) and finished by Constantine.[1]

On the contrary, San Vitale was modelled on the plan of Christian baptisteries like

[1] Lanciani, *The Ruins and Excavations of Ancient Rome.*

those of Neon at Ravenna, and of the Lateran at Rome, or else on that of some bath-room of the type reproduced in Fig. 103: a polygon with niches recessed in each of

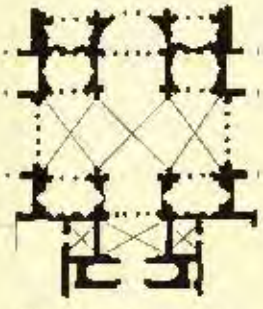


Fig. 101.—Rome. Plan of Hall in Baths of Nero (about 228).

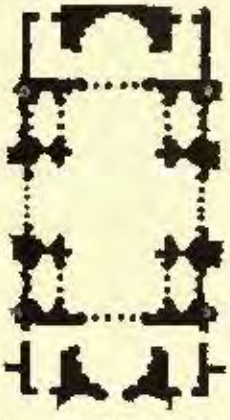


Fig. 100.—Rome. Plan of Hall in Baths of Agrippa (120–124).

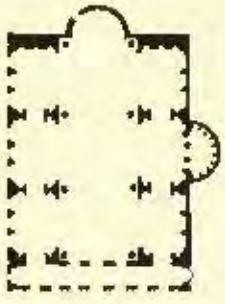


Fig. 102.—Rome. Plan of the Basilica Nova (310–312).

the sides, and apparently decorated with wall-shafts. The drawing by Baldassare Peruzzi, to which attention has not been previously called, is preserved in the Uffizi at Florence. Or else it may have been derived from the plan of some sepulchral edifice of the form shown in Fig. 104, or, again, from the Licinian Nymphaeum at Rome, known as "Minerva Medica" (253–268)[1]—a suggestion made before me by Isabelle[2]—with the addition, however, of an eight-sided outer wall to make the construction of an internal gallery possible. From this decagonal hall (rearranged it seems in the IVth century) the architect of San Vitale also borrowed the form of the narthex, and the idea of the buttresses at the angles of the polygon (Fig. 105).

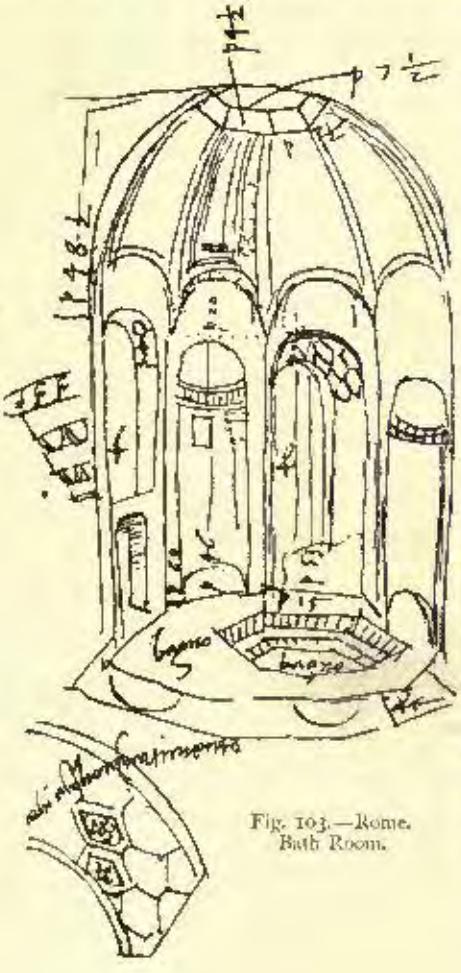


Fig. 103.—Rome. Bath Room.

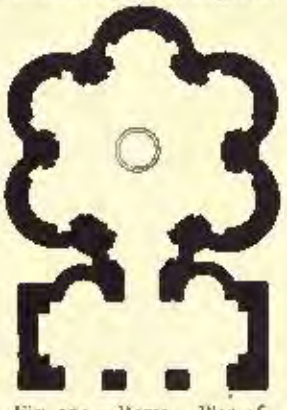


Fig. 104.—Rome. Plan of a Tomb. (*From Serlio, "De le antiquità."*)

This last derivation makes it easy to explain the family likeness which Choisy[3] found between the church of SS. Sergius and Bacchus at Constantinople and the Licinian Nymphaeum, for the church is in its turn

[1] Lanciani, *The Ruins and Excavations of Ancient Rome.*
[2] *Les édifices circulaires et les dômes.*
[3] *L'art de bâtir chez les Byzantins.*

derived from San Vitale at Ravenna. There can be no doubt that the plans of the latter were known to the architect of Justinian's building.

Fig. 105.—Rome. Licinian Nymphæum. "Minerva Medica" (253–268).

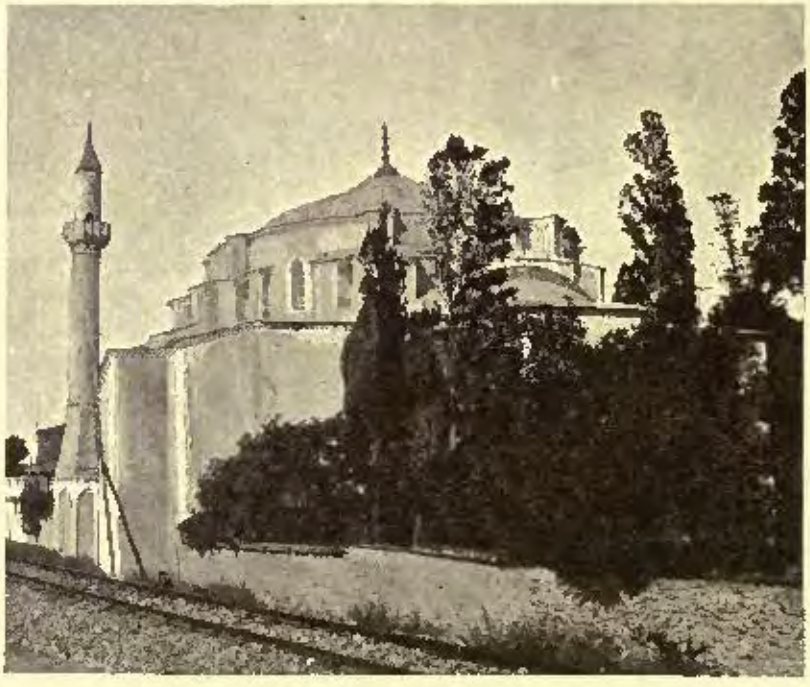


Fig. 106.—Constantinople. SS. Sergius and Bacchus (about 527).

In the next place, the narthex is of a characteristic Roman type, with a niche at either end, and has no analogy in any earlier Byzantine church. Then, the arrange-

ment of the two tiers of arcades, opening out of the exedras, is clearly derived from the internal arrangement of the baptistery of Neon, where we see all round, arches alternately framing the four niches and decorating the four wall-spaces, with, above them, a second tier of large arches, each enclosing three smaller ones, and forming the base of the dome. The derivation must be obvious to any eye accustomed to compare ancient buildings with one another. The first occasion when exedras of this kind were introduced in the East was in SS. Sergius and Bacchus at Constantinople, perhaps by Anthemius, who after gaining practice in this earliest of Justinian's buildings, was in a better position to undertake the great task of St. Sophia.

Fig. 107.—Constantinople. St. Sophia (532–537).

The dome, again, has a conical form; it is constructed in the Ravennate fashion with tapering tubes, and its stability partly depends on the walls of the outer drum being carried up above half the height of the dome itself. This, however, was not done in the Roman fashion, because the superstructure was not filled in to form one solid mass with the cupola, but in the Ravennate manner, previously followed in the baptistery of Neon. Whereas the great domes of the Byzantine churches which are contemporary, or nearly so, with San Vitale, derive, under Roman influence, some of their stability—besides external weighting, obtained by the raising of the outer drum above the haunch, and filling in—either from external buttresses set against the drum and a portion of the cupola itself, as in SS. Sergius and Bacchus at Constantinople (Fig. 106), or else from buttresses encircling its circumference, as may be seen in St. Sophia (Fig. 107), the dome of which (Fig. 108) was rebuilt by Isidorus the Younger between 558, the year in which it fell,[1] and 563,

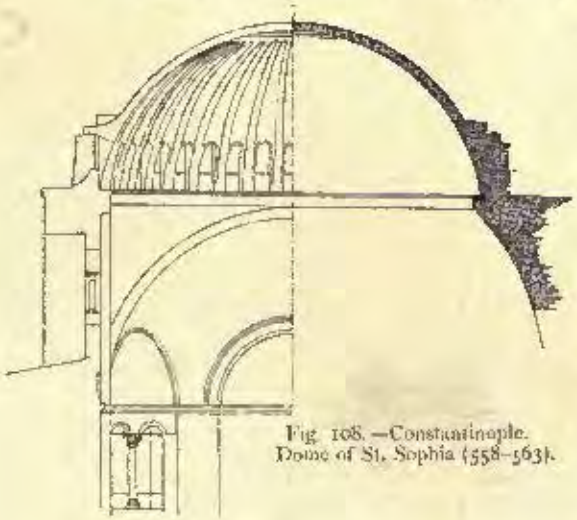


Fig. 108.—Constantinople. Dome of St. Sophia (558–563).

[1] *Corpus script. hist. byz.—Theophanis chronographia.*

when the church was restored.[1] These domes are, moreover, of a different type, and are constructed in a different way. Thus, St. Sophia has a flattened dome with ribs which show on the inner surface, and form continuations of the external supporting buttresses. And its material is brick. The dome of SS. Sergius and Bacchus,

Fig. 109.—Constantinople. St. Sophia (532–537).

following a Roman suggestion, has its internal spherical surface divided into compartments which are alternately flat and concave; and this feature reappears, though ill-formed, on the present external covering of the dome. Moreover, it is provided with ornamented ribs (it is not known whether they are in stone or plaster), which arch into one another at the crown, so as to leave a ring in the centre. Besides, brick is the material used.

[1] *Cornus script. hist. byz.—Chronicon Paschale.*

Again, the dome of San Vitale is not carried by triangular spherical pendentives, as in the case of St. Sophia at Constantinople (Fig. 109), where a recent re-examination of the building has persuaded me that the cupola of Anthemius was depressed, and, as in the great semi-domes of the hemicycles, supported by pendentives of the Romano-Ravennate type, continuous with the dome. The same was the case with St. Sophia at Salonica, where the external arched buttresses are a later addition (Fig. 110). The dome rests on a portion of drum forming a perfect junction at the angles where the dome meets the rectilineal faces of the polygon, by means of a recess or niche taken out of the angle at the point where the drum having become circular would be in want of some kind of support. This junction was an entirely new idea, without any analogy in earlier buildings.

The origin of this pendentive is to be traced to the hemicycles sometimes used by the Romans as supports for domes. The way in which this was carried out may be seen in the two lateral rooms of the internal west front of the "Domus Augustana" on the Palatine (about 85).

Fig. 110.—Salonica. St. Sophia (about 425).

Further, in San Vitale the graduated bracket-like projections of the eastern pediment are a VIth century decorative motive of the School of Ravenna, which has absolutely no analogy in any earlier building, either in Italy or outside it. Finally, its masonry, with the quality of the bricks and the way in which they are laid, as well as the use of mortar composed of lime, sand, grit, and pounded brick, is the result of local traditions. The last ingredient is freely used in the vertical walling, but sparingly in the vaulting, where sometimes it is altogether absent. The same traditions are also revealed in the construction of the still existing vault of one of the towers of the narthex, copied, as we saw, from that of the dome of the neighbouring mausoleum of Galla Placidia (about 440).

To conclude, San Vitale, finely thought-out example of the central architectural

type though it was, but, on account of its concentric form, ill-adapted to the Western character and the liturgical wants of the Latin Church, passed, like its brother after the flesh, San Lorenzo at Milan, merely like a brilliant meteor across the sky of Italian architecture. Nevertheless, it must be regarded as a building which was both in design and construction the work of craftsmen of the School of Ravenna, though some of its decoration was due to Greek artists. For to the latter, if we may judge from the present condition of the church, we must ascribe not only the capitals of the colonnade on the ground floor and of the presbytery, but also the mosaics of the sanctuary (probably purely Byzantine productions), as well as the original carving of the altar and the screens which enclose the chancel.

Basilica of San Lorenzo Maggiore at Milan.—The analogy and family likeness which the basilica of San Lorenzo at Milan presents to San Vitale at Ravenna suggests the idea that they are not only contemporary (a view mentioned before me by De Dartein),[1] but designed by the same architect, who could not have been a Byzantine, inasmuch as the plan of San Lorenzo has no resemblance to that of any church erected by Greek builders in the VIth or preceding centuries. The vicissitudes which Milan went through in the VIth century justify us in fixing its erection before the siege by Uraias (538).

The building—the beauty of which makes Arnulph exclaim: "O templum cui nullum in mundo simile!"[2]—suffered from fire in 1071,[3] and this gives reasonable ground for suspecting that, as in the case of San Vitale, the lower colonnade and the dome were originally covered by wooden ceilings. The damage, however, was quickly repaired. In 1123 part of the church collapsed, and the restoration had scarcely begun when the catastrophe was consummated by a second fire in 1124.[4] In the course of the restoration which followed this new misfortune, the lofty dome was buttressed by ramping arches in the way shown in a curious though not very trustworthy print in Giulini's book.[5] After a fresh and complete restoration it suffered from another disaster in 1573, when a large portion of the vaulting fell in. There was now no question of a restoration, but of the rebuilding of the principal part of the basilica, and this was carried out between 1574 and 1591.

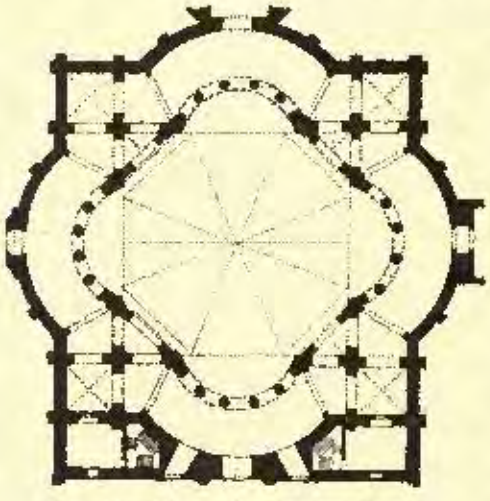


Fig. 111.—Milan. San Lorenzo Maggiore (VIth Century).

The church preserves its original form, and rests upon the old foundations. It is an octagon, encircled by an aisle with galleries, and supported on four of its sides by square towers (Fig. 111). From the outside (Fig. 112) the original walls are seen to be built of brick, and they are strengthened at the angles by substantial buttresses,

[1] *Étude sur l'architecture lombarde.*

[2] [3] Muratori, *Rerum ital. script.—Arnulphi historia Mediolanensis.*

[4] [5] Giulini, *Memorie spettanti alla storia, al Governo, ed alla descrizione della città, e della campagna di Milano, ne' secoli bassi.*

while the intervening spaces are decorated with lesenas and a cornice marking the floor-line of the internal gallery of the church, just as in San Vitale at Ravenna.

The best preserved of the square towers, the object of which was to increase not only the stability but also the decorative effect of the building, has its outer angles strengthened by returned lesenas, while its walls are constructed of regular courses of bricks separated by layers of mortar of varying thickness. The internal angle at the point nearest to the dome is strengthened inside by a boldly projecting buttress. The original dome was not an octagon of bricks, supported at the angles "by a number of small arches one above the other, each projecting a little further out than the one below it, in the manner still to be seen in those at Sant' Ambrogio," to

Fig. 112.—Milan. San Lorenzo Maggiore (VIth Century).

quote the account left by Bassi,[1] for the original dome must have had a conical vault constructed of terra-cotta tubes arranged in a spiral, like that of San Vitale at Ravenna, and supported at the angles by niches. Compound conical pendentives, in a perfect form as in Sant' Ambrogio at Milan, did not make their appearance till about the early years of the XIIth century.

The interior of the tower is lighted by rows of large, round-headed, unsplayed, windows. The structure of the walls shows that they belong to the same date as those of San Vitale at Ravenna. They might in fact be described as the work of the same builders. And the form as well as the distribution of the windows tell us that in the VIth century churches had not yet the adjunct of towers embellished by groups of windows divided by shafts, with their heads sometimes recessed; nor of towers which were the expression of some artistic idea. So that the bell-towers attached to Vth and

[1] *Pareri e disperi in materia di architettura e prospettiva.*

VIth century churches of the Romano-Ravennate and Byzantino-Ravennate styles are necessarily of a later date than the erection of the churches to which they belong.

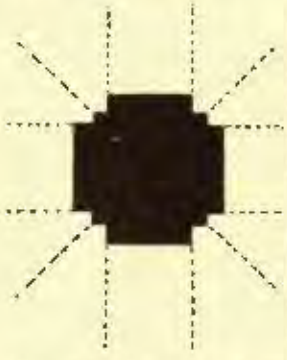


Fig. 113.—Rome. Basilica Julia. Plan of Pier (284–305).

Before finally leaving San Lorenzo, San Vitale, and the baptistery of Neon, the three buildings in which the School of Ravenna reached the zenith of its brilliancy in construction, I should like to say a few words about the direct descent of that School and the contemporary Byzantine School from the School of Rome.

In the first three centuries after Christ and for part of the IVth, the architects of Imperial Rome faced and solved little by little, wholly or in part, the vastest problems of construction and equilibrium that the world, so far at least as we can judge, had as yet attacked and mastered. Rome, on the eve of yielding up her sceptre to Constantinople, emitted a brilliant ray of light in which all her dying greatness was concentrated.

These solutions were later appropriated, developed, perfected, applied to new ends, first of all by the builders of Ravenna, next by the Byzantine architects, lastly by those of the Middle Ages.

Before now it has been observed that "every product of Egyptian, Oriental, and Greek architecture, appears as child's play by the side of the fully developed Roman arch";[1] and it has also been remarked that the Basilica Nova begun by Maxentius (310–312) was the first example of a vaulted basilica, and that in it "was solved the problem which had kept the whole of Western architecture in anxious suspense."[2]

Fig 114.—Rome. Basilica Julia (284–305).

Our statement can be verified by anyone who cares to do so, provided always that he has mastered the science of construction and equilibrium, and is acquainted with the great styles of architecture in vogue amongst other peoples, before and during those centuries. To do so, it will be sufficient for him to examine the remains of the imposing baths, villas, palaces, and tombs, which Rome and its environs still preserve. And we must not forget the basilicas. In the Basilica Julia in the Forum Romanum, as rebuilt by Diocletian (284–305), the cruciform piers at the corners of the middle row are provided with angle supports

[1] Wickhoff, *Roman Art.*

[2] Riegl, *Stilfragen.*

for the springing of the groins of the quadripartite vaulting, thus anticipating the compound Lombardic pier: a point which will have been noticed by others before me, though they have not taken the trouble to publish it (Figs. 113, 114). Above all, he must look at the Baths of Diocletian and Maximian. And the study must be completed by an examination of drawings that have been preserved of these monuments and of others which have been destroyed. For example, in a sketch attributed by Hülsen to Fra Giocondo, in Sangallo's volume in the Vatican Library, we see a Roman portico adjoining the Theatre of Marcellus, having cruciform piers (composed of a pier with two pilasters and two half-columns attached to it) with elaborate supports at the angles for the springing of the groins of the intersecting vaulting. And these piers alternate with columns (Fig. 115).

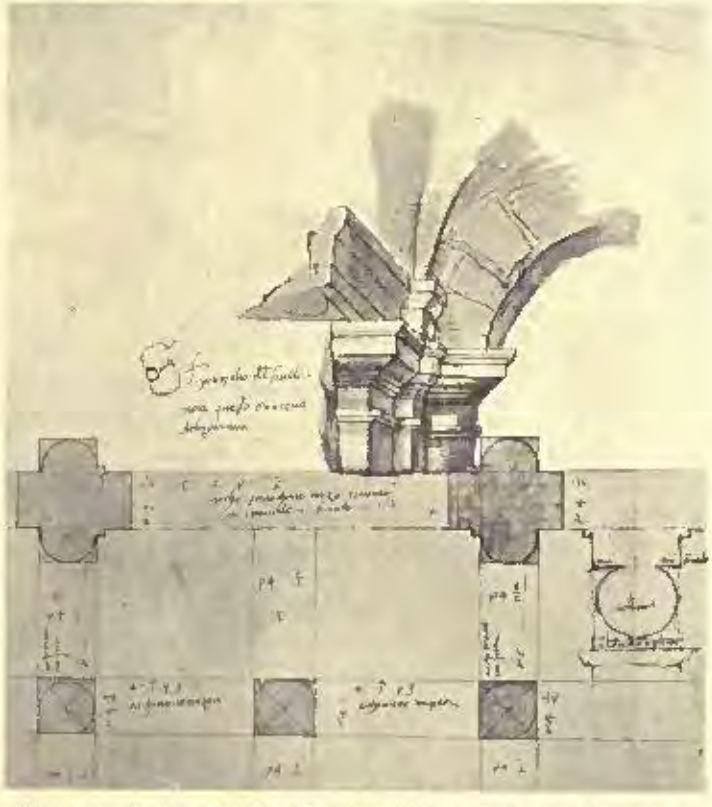


Fig. 115.—Rome. Sketch of Portico adjoining the Theatre of Marcellus.

I have specially selected the Baths of Diocletian (Fig. 116) because, to my mind, they sum up, so to speak, all the great principles of construction and statics attained by Imperial Rome; and also because it was to them that the builders of succeeding ages mainly had recourse. It will be enough if we give the plan of the Tepidarium and the chambers immediately adjoining, which form the nucleus of this stupendous building (Fig. 117); and also a section taken at the most important point of this central part, viz. the great hall with its three rectangular bays, having a rotunda to the west preceded by a semicircular recess, and its eastern side looking on to the Piscina (Fig. 118).

Many drawings (Fig. 119) of the Baths of Diocletian are in existence, and various plans, as well as a few reconstructions, either strictly architectural like those of Palladio,[1] or made with a purpose partly architectural and partly artistic, but mainly the latter.[2] No one, however, it appears has yet brought out the real importance of the influence exercised by this structure on the great architectural styles of later times both in its ground plan and in the principles of construction and equilibrium on which it is based. For instance, attention has never been called to the arrangement by which the circular hall connected with the Tepidarium is confined between four towers, of which the round ones are simply

[1] *Le terme di Roma.*

[2] Paulin, *Thermes de Dioclétien.*

staircases, while the rectangular ones are not only staircases but also act as the outermost buttresses of the great hall. This circular hall apparently provided the

Fig. 116.—Rome. Baths of Diocletian (306).

idea for the architect of the octagonal church of San Lorenzo Maggiore at Milan, "edita in turribus"[1] like its Roman prototype.

In the same way the marvellous system of equipoise applied to the Tepidarium has passed unnoticed. Here it is not merely a question of the simple and intelligent grouping of the surrounding structures with the object of resisting the thrust of the vaulting, as was carried out in Roman Baths. It is not even a case of such grouping assisted by the use of buttresses at the external angles where the thrust of the vaults is not counterbalanced by barrel vaults, an expedient a very early instance of which is afforded by the great Baths in Hadrian's Villa at Tivoli. On the contrary, it is a rational system of thrusts and counter-thrusts such as no great building had exhibited up to that time. For though based on the fundamental principles of equilibrium applied in the past by Roman builders, it still contains elements hitherto unknown, which impress on it a character of absolute novelty. These auxiliary elements combine, in one direction to secure the stability of the structure, and in another—and here comes out the practical Roman spirit—to supply its needs.

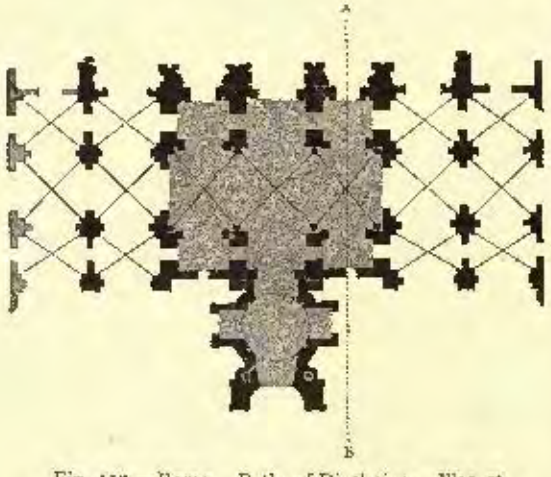


Fig. 117.—Rome. Baths of Diocletian. Plan of Tepidarium and adjacent parts (306).

[1] Muratori, *Rerum ital. script.—Versus de Mediolano.*

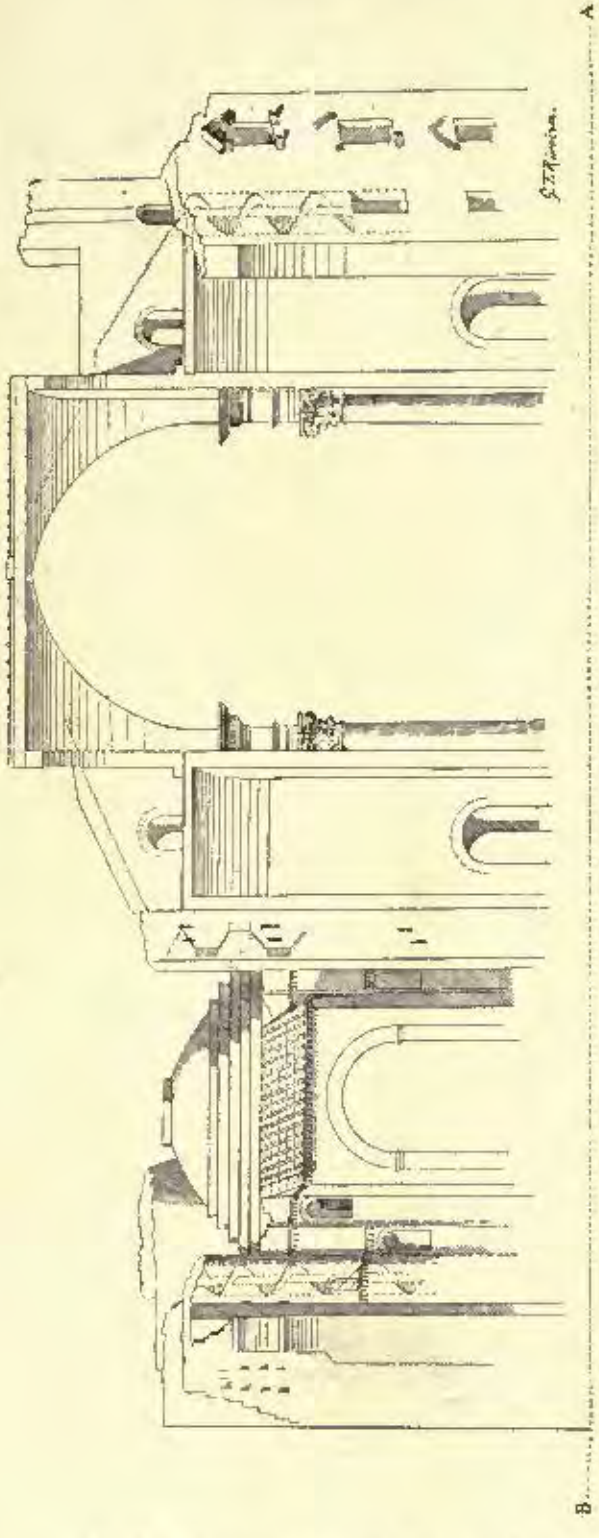


Fig. 118.—Rome. Baths of Diocletian. Section of the Tepidarium (306).

These elements may be seen applied, with this double purpose, to the support of the three cross vaulted bays of the great central hall. The intersecting vaults are of rectangular plan, the proportion of the sides being about 2 to 3, while the chord of the elliptical arc of the diagonal groins of the middle bay measures about 106 ft. The vaulting springs from columns set against the side walls and in the angles of the hall, a device which has been described as Byzantine, but is really Roman and used as far back as the 1st century in the Baths of Titus (80). In the Great Baths of Hadrian's Villa at Tivoli (125–135) stone corbels were used instead of shafts. These corbels are shaped somewhat like Ravennate pulvins, and are stuccoed and painted all over (Fig. 120).

Given the enormous span of this vaulting, and considering the instability of the diagonal depressed ribs, the master architect of the building was not content with using concrete composed of light materials in order to make the thrust less dangerous. He did not confine himself to springing the powerful, stilted, diagonal ribs from columns surmounted by an entablature. But in order the better to guarantee the structure against disintegrating and dislocating movements at the haunches of the vault, to which it would have been liable during the settlement of the solid vaulting, he had recourse to the following expedients for ensuring its stability.

(1) On the western side he set four ramping buttresses, over 14 ft. thick, each one relieved by an arched passage opening, and with its back forming a flight of

steps which gave access to the roof of the great hall. The weight of the two end ones was transmitted outwards on to massive piers (Fig. 121), while the two inside ones had the support of substantial rectangular staircase towers. Pierced ramping buttresses of this kind were employed shortly afterwards, quite likely by the same architect, in the Basilica Nova (Fig. 122), where we get a repetition of the arrangement of Diocletian's Tepidarium, with the great hall of three bays covered by quadripartite vaulting, flanked by six compartments with barrel vaults. The greater simplicity of the buttressing in the Basilica is to be explained by the lessons learnt from the construction of the Tepidarium. It should, however, be borne in mind that this simplification was not for the benefit of the Basilica, grand as it was, for the earthquake of 1348 brought down the nave and one of the aisles;[1] while Diocletian's Tepidarium, with its more complicated but more stable construction, is still there, practically intact, to tell us what a great architect its designer must have been. An account by Boni of the recent excavations in this Basilica is in course of preparation.

Fig. 119.—Rome. Baths of Diocletian. (*From a Drawing by Dosio in the Uffizi.*)

(2) On the eastern face he set four rectangular buttresses, arched like the others, and enclosing stairs. Externally they are strengthened by ponderous projecting piers built up above the level of the buttresses, and two of these contain spiral service-stairs.

(3) He closed the two sides of the hall by chambers with quadripartite vaulting, again strongly ribbed (Fig. 123), which is kept in place by a double set of massive internal supporting piers at the angles, and by equally solid external buttresses.

The system here described was the

Fig. 120.—Tivoli. Villa of Hadrian. Hall in Great Baths (125–135).

[1] Lanciani, *The Golden Days of the Renaissance in Rome.*

source of numerous and important suggestions. Thus, the architect of St. Sophia at Constantinople took from it the idea of the four buttress towers on the north and south, which by means of the same number of arched buttresses (in San Vitale at Ravenna Julianus Argentarius had already provided support for the piers of the dome by connecting them through arches with the massive buttresses at the external angles) receive the thrust of the great arches transmitted through the piers of the central dome of the most famous of Justinian's buildings (Fig. 124). For everything leads us to think that Anthemius, who is described by Procopius[1] as the master builder, must be regarded not only as the builder, in partnership with Isidorus of Miletus, of Justinian's church, but also as the originator of the plans for it. In fact, it appears from Procopius that Isidorus was not the author of the design, but rather the associate of Anthemius, and an architect capable of carrying out plans already prepared. Of Anthemius we read in the Silentiary's poem that he was "skilled to draw a circle and set out a plan."[2] Gyllius[3] had noticed the fact before me: "Quamquam Anthemius, qui aedem Sophiae architectatus erat." So that everything leads us to believe that Anthemius studied on the spot the great buildings of Rome in order to base on them his plans for St. Sophia; and this is all the more likely because one of his brothers, Alexander, followed the profession of medicine at Rome.[4]

Fig. 121.—Rome. Baths of Diocletian (306).

Fig. 122—Rome. Basilica Nova (310-312).

In this way would be explained the family likeness, to which we have already called attention, between the plan of St. Sophia and the two halls of the Baths of

[1] *Corpus script. hist. byz.—De aedificiis dn. Justiniani.*
[2] Migne, *Patr. Gr.*, Vol. 86.—*Paulus Silentiarius, Descriptio Sanctae Sophiae.*
[3] *Op. cit.—De Templo Sophiae.* [4] *Corpus script. hist. byz.—Agathiae Scholastici Myrinensis historiae.*

Agrippa and Nero, as well as the Basilica Nova of Maxentius and Constantine. And we must not omit the system of dividing the great windows by isolated uprights followed in the Baths of Diocletian.

Fig. 123.—Rome. Baths of Diocletian. Ribbed Vault (306).

Fig. 124.—Constantinople. St. Sophia (532–537). (*From a drawing in San Gallo's volume in the Vatican Library, made before the Turkish Conquest.*)

The Lombard architectural gilds were also in touch with the principles of construction and equilibrium as applied in the Tepidarium of the Baths of Diocletian.

They borrowed from it, for instance, the arched ramping buttresses carried up above the roof from the transverse arches of the aisles, as applied in San Babila at Milan (XIth century) and the church of Rivolta d'Adda (XIth century). This expedient was the origin of the flying buttresses of the Pointed style. Another thing that they borrowed was the system of groining with diagonal ribs.

Anthemius of Tralles was not alone among Justinian's architects in deriving suggestions from the great Latin mother-city. As a matter of fact, the designer of SS. Sergius and Bacchus at Constantinople (about 527) borrowed so freely from the Licinian Nymphaeum that Choisy[1] remarks that the plan of either building might be a copy of the other. Nor did he omit to notice the radiating ribs forming part of the concrete mass of the Nymphaeum; and they suggested to him the ribs which, as it seems, form the structural skeleton of the dome in SS. Sergius and Bacchus (Fig. 125). It appears that ribs standing out from the inner surface of the dome were themselves an idea borrowed from Roman buildings. In fact, if we may judge from some of the illustrations in Montano[2]—trustworthy so far as the ground plans are concerned, though the elevations are based, partly on remains then in existence, and partly on the imagination—it will appear that the salient lines of the dome carried down on to the columns below were indications of the radiating ribs which formed the essential structure of the dome itself (Fig. 126).

Fig. 125.—Constantinople. SS. Sergius and Bacchus (about 527).

And this was not the only source, for he derived from another Roman building, the Serapeum of Hadrian's Villa at Tivoli (Fig. 127), the idea of a dome, the surface of which is (as others[3,4] have also noticed) a rhythmic sequence of flat and concave sections unsupported by pendentives, simply flush with the course of the drum from which they start, and not an alternation of segments of circles more or less concave

[1] *L'art de bâtir chez les Byzantins.* [2] *Op. cit.*
[3] Lethaby, *Mediæval Art.*
[4] *The Builder*, Jan. 6, 1906. Henderson, *SS. Sergius and Bacchus, Constantinople.*

to the interior, as has been supposed.[1][2] Further, he did not overlook the application to his dome of the device of carrying up the drum above the haunch, so that by this increase of weight he might obtain greater resistance to the thrust of the dome itself. This expedient had been employed on a grand scale by the Roman builders ever since the time of the Emperor Hadrian, and it reached its climax in San Vitale at Ravenna. Lastly, he did not omit to pierce a circle of openings in his dome, after the manner of so many buildings at Rome, for instance the so-called "Tempio di Siepe" (117–138), the mausoleum of the Gordians known as "Tor de' Schiavi" (IIIrd century), and the great circular hall of the Baths of Caracalla (212–216). The final touches of his plans were taken from San Vitale.

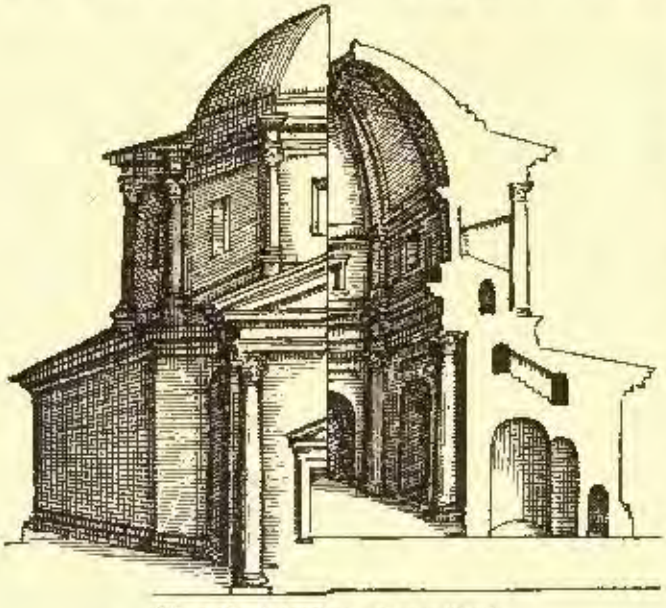


Fig. 126.—Palestrina. Roman Tomb.
(*From Montano, "I cinque libri di architettura."*)

When Isidorus the Younger at a later date rebuilt the dome of St. Sophia at Constantinople, he strengthened it with external buttresses, and provided it with visible radiating ribs suggested to him by the "Mausoleum Augustorum," a work of the Vth century, in which Honorius (395–423) was buried, and to which the body of Theodosius II was brought from Constantinople in 451.

Fig. 127.—Tivoli. Hadrian's Villa. Serapeum (125–135).

This Imperial Mausoleum consisted of a pair of rotundas. One of them, known as Sant' Andrea or Santa Maria della Febre, was consecrated by Pope Symmachus (498–514), and demolished in 1776 (Fig. 128). The other, known as Santa Petronilla, was dedicated by Stephen II (752–757)

[1] Choisy, *l'art de bâtir chez les Byzantins.*
[2] *Records of the Past*, Dec. 1906.—Marquand, *The dome of SS. Sergius and Bacchus at Constantinople.*

and Paul I (757–767), and destroyed under Paul III (1534–1550).[1][2] Of the latter I reproduce an interesting sketch preserved by Giacomo Grimaldi[3] (Fig. 129).

The cupolas of these rotundas were strengthened externally by powerful buttresses, and internally by visible radiating ribs springing from brackets, as we learn from a sketch preserved by Cancellieri[4] (Fig. 130). Such ribs must have been supported originally by wall-columns in the manner shown by Fig. 126.

Fig. 128.—Rome. Imperial Mausoleum near St. Peter's (Sant' Andrea) (Vth Century). (*From a painting in the Vatican Library.*)

The School of Ravenna continued, and at the same time improved on the traditions of scientific construction as practised by the builders of the Roman Empire; and the connecting link is to be found in the architects and constructors who settled at Milan after Maximian had fixed his official residence there. The failure of all preceding writers to recognise the existence of this School, so totally distinct from the Byzantine, has resulted in the invention by so many of them of an imaginary Byzantine style in Italy. On the contrary, so far as architecture is concerned, that style was, in its earlier or Romano-Ravennate phase, the creation of Italian builders, seeing that not one of its distinctive features had previously made its appearance in the East; while in its second stage, it became the Byzantino-Ravennate style, based on principles derived from Rome and Ravenna, together with suggestions drawn from the School of Salonica.

Fig. 129.—Rome. Imperial Mausoleum near St. Peter's (Santa Petronilla) (Vth Century).

Another result has been that, in order to explain the presence in the monuments of Ravenna of essential elements which are not to be found in contemporary or earlier buildings of the Byzantine style, some of these writers were compelled (De Dartein,[5] for instance, in the case of the massive buttresses at the external angles of San Vitale at Ravenna) to fall back on a supposed influence of the foreign soil in which Byzantine archi-

[1] De Rossi, *Inscriptiones Christianae urbis Romae.*

[2] *Nuovo Bullettino di arch. crist.*, 1905.—Rohault de Fleury, *Saint André au Vatican.*

[3] Rome, Biblioteca Casanatense. Cod. MS. 2421.—*Catalogus sacrarum reliquiarum Vaticanae basilicae principis Apostolorum.*

[4] *De Secretariis novae basilicae Vaticanae. Lib. II.*

[5] *Op. cit.*

tecture was endeavouring to take root. Or else they found themselves obliged to assert, for instance, that domes constructed with tapering terra-cotta tubes, like that of San Vitale, were of Byzantine origin; whereas, on the contrary, the first to make use of such terra-cotta tubes in vaulting were the Campanian builders, and those of the Roman province of Africa, and of Sardinia as proved by the excavations of 1876 in the so-called house of Tigellius at Cagliari. Moreover, the oldest example on record of a dome so constructed is that of the apse of the old Basilica Ursiana at Ravenna (370–384). Again, we know how the domes of Eastern churches were constructed in the period to which San Vitale belongs: St. Sophia and

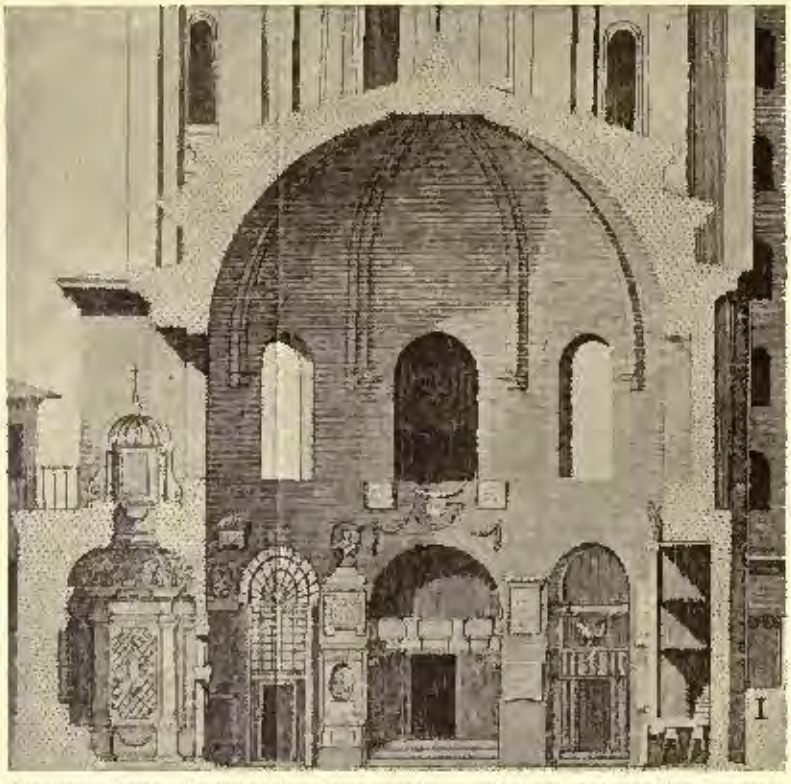


Fig. 130.—Rome. Imperial Mausoleum near St. Peter's (Sant' Andrea) (Vth Century).

SS. Sergius and Bacchus at Constantinople are there to tell us. Unless, indeed, such spaces were covered by wooden roofs, like St. George of Ezra (515–516) and the cathedral of Bosra (511–512).

When others who have taken the trouble, as I have done, to make themselves at home in the science of construction and the builder's craft, shall have studied the vaulted architecture of Rome and Ravenna with the same devotion that has been lavished on the contemporary Eastern styles, and with as great or greater thoroughness, it will at last be determined whether the East exercised on Italian architecture the influence ascribed to it by Cordero,[1] Cattaneo,[2] Strzygowski,[3] and so many others; or whether, on the contrary, it was Roman principles of construction, a creation of the Latin mind, that, together with those of Ravenna, were infused into Byzantine architecture, which is the conclusion to which I have come and, as I believe, have proved.

[1] *Dell' Italiana architettura durante la dominazione Lombarda.*

[2] *L'architettura in Italia dal secolo VI al Mille circa.* [3] *Orient oder Rom.*

THE BASILICA OF SANT' APOLLINARE IN CLASSE, erected by Julianus Argentarius at the order of Archbishop Ursicinus (533-536), was consecrated in 549 by Archbishop Maximianus, the builder of Santo Stefano *in Olivis* at Ravenna, and of Santa Maria *Formosa* at Pola.[1]

It consists of a nave and two aisles (Fig. 131), with wooden roofs, separated, like Sant' Apollinare Nuovo and San Giovanni Evangelista, by twelve marble columns on either side, the number of the Apostles, surmounted by capitals of Composite character with protuberant leaves of the *acanthus spinosus*, deeply undercut so that the shadows are strongly accentuated, and treated in a monotonous manner with rows of small holes made with the drill along the ribs of the leaves. These capitals, which carry

Fig. 131.—Classis (near Ravenna). Sant' Apollinare (533-549).

the ordinary Ravennate pulvins marked with crosses on their outer faces, must be ascribed to Byzantine chisels, not only on account of the design and technique, but also because they do not all exactly fit their columns; so that it may be reasonably inferred that they were not made on the spot.

The nave ends in an apse, semicircular internally and five-sided externally, flanked by two sacristies which form prolongations of the aisles, and have apses of the same form as the principal one. The raised chancel with the crypt beneath it, which some believe to be contemporary with the church, are really works of the XIIth century, carried out after the relics of St. Apollinaris were removed from beneath the altar of the Virgin, and deposited in a more conspicuous position in the central part of the church.[2]

Originally, the oldest churches of Ravenna possessed neither crypts nor elevated presbyteries. As for those of considerable elevation, like that of Sant' Apollinare

[1] *Mon. Germ. Hist.*—*Agnellus, Liber pontificalis.* [2] Fabri, *op. cit.*

which is raised as much as eleven steps above the ground floor, I have never yet found a trace of such in any church of certain date before the second half of the Xth century. Presbyteries of moderate elevation, such as that of Kalb-Lauzeh in Central Syria (VIth century) raised seven steps above the pavement of the church, were never erected above a *Confessio*. In Syria the origin of these elevated platforms may be traced to the raised sanctuaries of temples of the Roman epoch. At Baalbeck, in the temple of Bacchus, the platform on which, looking west, the image of the titular divinity was erected, with its annular barrel vaulted crypt beneath, is raised as many as sixteen steps above the floor of the temple.

The walls are constructed of courses of brick separated by layers of mortar of

Fig. 132.—Classis (near Ravenna). Sant' Apollinare (533–549).

varying thickness. The side walls of the nave and aisles (Fig. 132) are decorated with blank arcading corresponding to the arcades of the interior. These are pierced by very large round-headed windows. The arcades of the aisles springing from pilasters which project about 8 in., thus allowing the wall itself to be reduced to the moderate thickness of about 2 ft., describe an unbroken curve round the windows without any indication of capitals. Those of the nave, on the other hand, have impost cornices formed of three projecting courses of bricks, and rest on bases of the same material.

The apses are decorated with a saw-tooth cornice. The principal one, at its junction with the eastern wall of the church, is flanked by massive buttresses. The end walls of the aisles are raised above the line of the roofs so as to form two strong abutments corresponding to the sanctuary arch. The eastern front exhibits, at the lower ends of the gable and of the two half-gables, the characteristic graduated

bracket-like projections which we saw for the first time in the eastern front of San Vitale. The western front, strengthened by pilasters at the outer angles, is pierced by a three-light window with small shafts carrying pulvins carved with crosses on their faces; and this, with the round-headed windows in the side walls and the apse, provided all the light for the church. Originally this front was approached through a square atrium or cloistered fore-court, the only traces of which above ground belong to the side from which the church was entered. It was closed at either end by a squat tower. The one to the left still exists, and measures internally about 28 ft. by 31 ft. Close to the left aisle rises the majestic campanile. It has a wooden roof, and its construction, in which shorter and thicker bricks are used than those in the walls of the church, shows that it is an addition of a later date than that of the basilica itself.

The architect of Sant' Apollinare in Classe, as we have already observed in the account of San Vitale, was Julianus Argentarius. And it was the work of builders of Ravenna, as is indicated by the construction of the walls, and also by the decorative motives of blank arcades and saw-tooth cornices.

The most notable thing about this building is the method adopted by its creator, chiefly with a view to lightness of construction and therefore economy, of compensating the thinness of the outer walls by facing them on the outside with blank arcades, and strengthening them at the most important points by buttresses of greater or less substance as the occasion demanded. The principle of making the elements of resistance depend on their distribution rather than on their bulk had been already applied by the same architect in San Vitale, where he displayed a marvellous grasp of the principles of scientific construction such as had not been seen, so far as we can judge from existing monuments, since the erection of the Baths of Diocletian.

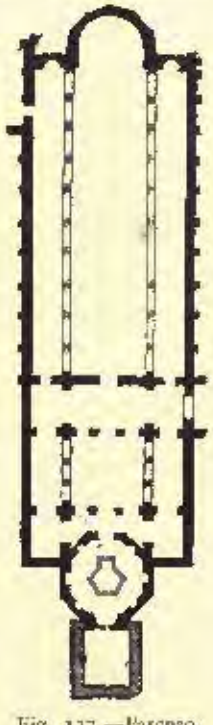


Fig. 133.—Parenzo. Plan of Duomo (about 535–543).

THE CATHEDRAL OF PARENZO was the work of its first bishop, Euphrasius (about 521 or 522–553), and was erected between 535 and about 543.[1] The founder with a model of the church in his hand is represented in the semi-dome of the apse, at the base of which may be read his dedicatory inscription. Restored again and again in mediaeval and modern times, enough of the orginal structure still survives to make it one of the most valuable monuments of the early centuries of Christianity that the Italian peninsula can boast.

It is a basilica with a nave and two aisles, the former ending in a deep apse, internally semicircular and decorated with precious mosaics, while the exterior presents the form of a semi-dodecagon. The side apses are merely niches sunk in the outer walls (Fig. 133). The nave is separated from the aisles by twenty round arches, ten on either side, supported by marble columns, on which are set capitals carrying pulvins of the Ravennate type bearing the monogram of Euphrasius (Fig. 134).

These capitals do not in every case fit their columns, which makes one think that they were not wrought on the spot but were imported from Constantinople, where it seems that, in the VIth century, marble capitals were prepared

[1] Jackson, *Dalmatia, the Quarnero, and Istria.*

and carved for exportation. It was from this source, in all probability (unless indeed they imported them from Salonica), that the craftsmen of Ravenna, capable architects and builders, and excellent mosaic workers as they were, but not such skilful carvers as the Greeks, procured the capitals of the marble of Proconnesus (the kind in common use in the capital of the Eastern Empire), worked in the Byzantine style, which they used not only in the nave of the cathedral of Parenzo, but also in those of the cathedral and the church of Santa Maria at Grado (571–586), of Sant' Apollinare in Classe near Ravenna (533–549), and of the abbey church of Pomposa (VIth century), as also in the lower colonnade and the upper arcades in the presbytery of San Vitale at Ravenna (526–547).

Fig. 134.—Parenzo. Duomo (about 535–543).

These capitals belong to three Byzantine types; the cubical funnel-shaped (Fig. 135); the Composite bird and basket (Fig. 136); and a Byzantine version of the Composite capital, with the body shaped like an expanded calyx. Both in design and execution, all of them, with those of the atrium, are clearly the work of Byzantine hands.

With the exception of the apses, the building is entirely roofed with timber. The outer walls are of "opus incertum" of broken stone and brick. On the outside they are strengthened by buttresses at the angles. The walls of both nave and aisles are decorated with blank arcades. The exterior of the apse, on the other hand, is plain.

Opposite to the basilica opens the door of the octagonal baptistery, which is contemporary with the atrium and basilica. This arrangement had been employed as long ago as the IVth century in the cathedral of Aquileia (rebuilt by the patriarch Poppo, 1017 or 1019—1042 or 1045), and was probably suggested by that of the *cantharus* which stood in the middle of the atrium in the oldest

Christian basilicas. The Byzantines did not introduce it in any church of earlier date than the one with which we are dealing. For instance, in the pre-Justinianean St. Sophia at Constantinople the baptistery was circular, and placed at the side; and there it may still be seen standing to the north of the present church, exactly like the baptistery of the Constantinian basilica of St. John Lateran at Rome. For, as has been suggested before now,[1] this large circular building, with its rectangular niches recessed in the thickness of the wall, suits the time of Constantine I (306–337) and Constantius II (337–361), who appear respectively as the founder and rebuilder of the original St. Sophia, and is in all probability that baptistery which was large enough to accommodate the Sixth Council of Constantinople (394).[2] Later it was turned into a sacristy, after the erection of the new baptistery (now the tomb of Mustapha I) by Justinian near the Horologium, with the dedication of St. John the Forerunner.[3] The latter building in form and construction exactly suits the time of Justinian, with its octagon planned like the two lateral rooms of the inner west front of the "Domus Augustana" on the Palatine at Rome (about 85), though the central space passes into the circle of the dome by means of eight spherical pendentives of the Romano-Ravennate type, continuous with the dome itself.

Fig. 135.—Parenzo. Capital in the Duomo (about 535–543).

Fig. 136.—Parenzo. Capital in the Duomo (about 535–543).

The upper part of the façade of the cathedral of Parenzo is pierced by three large, round-headed windows.

The church of Euphrasius, possibly designed by Julianus Argentarius, was, so far as its construction is concerned, apparently the work of builders from Ravenna. Their presence is revealed by the plan, taken from the Roman basilica, with the modifications introduced by the School of Ravenna; that is to say, the apse with its polygonal exterior, flanked by sacristies, which in this case are reduced to minor apses. Another feature is the external decoration of blank arcades, which we

[1] Lethaby and Swainson, *The Church of Sancta Sophia, Constantinople.*
[2] Du Cange, *Hist. Byz.—Constantinopolis Christiana.*
[3] Banduri, *Imperium Orientale sive antiquitates Constantinopolitanae.—Anonymus, de Sancta Sophia.*

find in the contemporary as well as in the older basilicas of Ravenna. Then, there is the strengthening of the external angles; and, lastly, the tri-apsidal arrangement.

CHURCH OF SAN VITTORE AT RAVENNA.—We know that it was in existence in 564.[1] Alterations in later times reduced it to the state which it presented before the recent restoration.

Originally it consisted of a nave and two aisles. Part of the nave survived, with brick piers of **T** shape carrying an arcade; and it ended in an apse, semicircular internally and five-sided externally. Both nave and apse were lighted by very narrow, round-headed windows, splayed on the inside. The pilasters attached to the piers were carried up and merged in an arched corbel course. There is the usual saw-tooth cornice at the top.

The late restoration was based on indications of the portions which had vanished. It was then made clear, among other things, what was the size of the original building, the nave of which had a width of about 21 ft. from pillar to pillar, while the aisles measured respectively, about 13 ft. from the pillars to the outer wall in the case of the left aisle or women's side, while the right was under 9 ft. wide. There were also discovered on the front of the church, which was pierced high up by three round windows, two buttresses marking the internal distribution of nave and aisles.

The church of San Vittore tells us that, in the second half of the VIth century, or, to be more precise, after the erection of the basilica of Sant' Apollinare in Classe (533–549) and the cathedral of Parenzo (535–543), and about the year 564, when we know that our church was already in existence, the builders of Ravenna were beginning to light their basilicas with narrow windows instead of the spacious ones which they had employed previously. We cannot say whether this was due to the spirit of the age, or to the fact that from lack of pecuniary means the new basilicas no longer displayed the same splendour of gold and gleam of precious marbles as the churches of Ravenna had commonly done in the past, and therefore no longer demanded a superabundance of light.

At the same date another church of Ravenna was provided with narrow windows —Sant' Andrea, of which only some poor relics survive. Founded by Archbishop Peter Chrysologus (433 or 439–449 or 458), it was certainly restored by Archbishop Maximian (546–556), when, as Agnellus relates, marble columns replaced the wooden supports. In the course of this restoration it seems that the inscription referring to the original foundation, and also the portrait of the founder, were preserved. Agnellus gives an account of them.

San Vittore and Sant' Andrea provide a test by which the age of other buildings in the Ravennate style, which have no certified dates, may be fixed approximately.

CHURCH OF SANTA MARIA DI POMPOSA.—Its erection is generally referred to the VIth century, and there is proof that it was already standing in 590.[2] I believe that it may be ascribed to the years which followed the consecration of Sant' Apollinare in Classe, and before the building of San Vittore at Ravenna. The reason is that, in the interior, marble columns were still used, as in the church at Classis, whereas brick piers were employed in San Vittore. And again, the nave

[1] Fabri, *op. cit.*

[2] Bottoni, *Pomposa al tempo di Guido suo monaco.*

walls at Pomposa are not pierced with the narrow windows of San Vittore and Sant' Andrea.

The interior is divided into a nave and aisles, with nine arches on each side supported by marble columns, on which may be seen, among others, capitals in the Byzantine style carrying the usual Ravennate pulvins and suggestive of the VIth century. It terminates in three apses, the principal one being polygonal externally and semicircular internally, while the subordinate ones are semicircular both inside and out.

The exterior of the nave is decorated on its northern face, which is the least

Fig. 137.—Pomposa. Santa Maria (VIth Century).

restored, by blank arcading, the openings of which, as in the nave arcade in the interior, are of various sizes. Each of the arches contains a very large round-headed window. The aisle walls were evidently originally decorated on the outside with lesenas, and pierced by narrow windows. The upper part of the front (Fig. 137) exhibits in the gable the two bracket-like projections characteristic of Ravenna, and is strengthened by two buttresses which divide it into three parts. This division had been already applied to the front (now destroyed) of Santa Croce at Ravenna.[1] Against the lower part a narthex was added at the time when various decorative works were carried out, and the church was consecrated in 1026. The date may be read in the centre of the mosaic pavement of the nave. The exterior of this narthex is decorated with interesting carvings, on which instructive comparisons may be based. Near to the left aisle rises the imposing campanile, about 163 ft. high, built in the Lombardic style in 1063 to replace a massive lighthouse tower.[2]

[1] *Bull. di arch. cristiana*, 1866.—F. Lanciani, *Scoperte negli edifizi cristiani di Ravenna.*

[2] Federici, *Rerum Pomposianarum historia.*

CHURCH OF SAN PIETRO IN SILVIS, OR PARISH CHURCH OF BAGNACAVALLO.—The construction is evidence for assigning it to about the same date as San Vittore at Ravenna. Of previous writers, Graziani[1] considered it to belong to the VIth or preceding century; Cattaneo[2] placed it in the VIth.

The interior contains a nave and aisles, separated by plain piers of T form supporting the round arches which carry the walls of the nave. The pilasters which project from these piers and increase their solidity stop before reaching the line of the aisle roofs. Both nave and aisles have wooden roofs, and the former ends in an

Fig. 138.—Bagnacavallo. Parish Church (VIth Century).

apse, semicircular internally and polygonal externally. One of the aisles is wider than the other.

The walls, as well as the piers, are built of regular courses of brick set in mortar made of lime, sand, grit, and pounded pottery. The side walls of the nave (Fig. 138) are decorated with a large arched corbel course marked off in pairs by lesenas, which rise from a stringcourse of brick, and are crowned by a saw-tooth cornice. Windows open in it at regular intervals—no longer the large ones of the older basilicas of Ravenna, but of restricted dimensions. They have round heads, and are splayed inside. The side walls of the aisles are on the outside divided into compartments by lesenas, and have very narrow round-headed windows, mere loopholes in fact, splayed both inside and out. They do not correspond to the windows which light the nave.

[1] *Notizie istoriche della chiesa arciprotale di San Pietro in Sylvis di Bagnacavallo.* [2] *Op. cit.*

The front of the church presents a uniform surface, but the divisions of the interior are indicated by two buttresses which correspond to the lines of the nave

Fig. 139.—Bagnacavallo. Parish Church. Arch of Ciborium (783–826).

arcades. The outer angles are strengthened by returned lesenas. The pediment of the nave, below which is a two-light window with stilted arches resting on a marble shaft carrying a pulvin, and the half-pediments of the aisles, are ornamented with the characteristic graduated bracket-like projections so often met with. The eastern pediment has similar graduated projections, and is pierced by a small window in the form of a cross, now blocked up, but originally intended to provide ventilation for the timbers of the nave roof. A round tower formed an adjunct to the church in former times, but it is believed to have collapsed in the earthquake of 1688, and has now completely disappeared.

Fig. 140.—Rome. Villa called "Sette Bassi." Double-splayed window (100–155).

In the church are preserved two arched tops of an altar ciborium (Fig. 139) given by one John, who was the parish priest at the time when Deus Dedit was bishop of Faenza (783–826).[1] It is Ravennate work.

The church of Bagnacavallo, which by a fortunate chance has kept its original form almost untouched, claims our special attention. It is, in fact, the ecclesiastical building which provides the oldest surviving specimens of narrow round-headed windows with double splays. The Romans sometimes used openings of this kind in sepulchral chambers, for they are to be seen in two such structures illustrated by Montano,[2] which formerly stood, the one outside the Porta Salaria, the

[1] Graziani, *op. cit.*

[2] *Op. cit.*

other on the Via Labicana near Rome. The only existing example which I can point out, and it has not been previously noted, is to be found in a cryptoporticus (a good deal of which is buried by the accumulation of soil) of the villa known as the "Sette Bassi" on the Via Latina (100–155), where may be seen a row of loopholes with double splays (Figs. 140, 141), still preserving their brick facing. The builders of Ravenna were, however, the first to use them in churches, just as may be seen in the one at Bagnacavallo, which unquestionably came from their hands. Later they were appropriated by the Comacine gilds. In the present case the employment of these openings, about which there has been so much fanciful writing, is easily explained by the conditions of the locality in which the church was situated. The reasons were: first, the necessity of preventing ill-intentioned persons from obtaining an entry into churches in remote and unprotected situations, during the hours when they were closed, by means of the windows nearest to the ground, and consequently easiest of access. In the second place, the need of compensating for the loss of light resulting from the restriction of the window opening to the smallest possible compass; for it is known that a double splay, as compared with a single one, has the advantage of admitting a greater amount of both direct and diffused light. Thirdly, the convenience of making the windows, by means of the double splay, appear larger than they really are, and so contributing to the decorative treatment of the walls, as well as to the monumental aspect of the building.

Fig. 141.—Rome. Villa called "Sette Bassi." Plan of double-splayed window (100-155).

The church also provides an interesting example of an unbroken façade divided into compartments by buttresses which fulfil the triple purpose of clearly indicating the divisions of the interior, of decorating the front of the church, and of providing additional support.

CATHEDRAL OF GRADO.—The present building is the work of the patriarch of Aquileia, Elias (571—586).[1] This is confirmed by the mosaic inscription existing in the pavement of the church.

It is a basilica with nave and aisles. The former terminates in a deep apse, semicircular internally, and polygonal externally, and is separated from the aisles by marble columns crowned with capitals, some of which are Roman ones brought, in all probability, like the columns and their bases, from the neighbouring Aquileia; while others are cased in stucco, and others, again, are of the same date as the building of the church. These last are in some cases Composite, with the body shaped like a bell, and turn-over leaves of the *acanthus spinosus* laboriously worked with the drill. Others, again, are of the cubical Byzantine type with foliage carved on the faces, and sometimes crosses made in the sides of the basket, and deeply undercut. They are all the work of Greek chisels, as is clear from the execution.

The arches, above which rise the walls of the nave carrying the open timbered roof, spring directly from the abacus of the capitals, thereby securing the advantage of admitting more light and increasing the elegance of the building. This very simple method of springing arches from columns, previously adopted in the palace of Diocletian at Spalato, built between about 300 and 305,[2] had its origin at Pompeii. Arches (of course earlier than the catastrophe of 79) with this peculiarity have been found there, and are mentioned by Choisy.[3]

[1] Gams, *op. cit.* [2] Jelić, Bulić, and Rutar, *Guida di Spalato e Salona.* [3] *Histoire de l'Architecture.*

These nave walls are strengthened on the outside, at points corresponding to the columns of the interior, with lesenas of slight projection finished off by a moulding. They now stop short of the cornice under the roof, but originally must have carried blank arcades. To each pair of these lesenas correspond single ones on the inside, starting between the arches of the nave and rising as high as the tie-beams of the roof. The original windows were small and round-headed. The gable of the front exhibits the usual Ravennate bracketed projections.

The church is approached through an atrium of the same date, part of which was taken up later by a square campanile. Close by, on the north side, as in the case of the original Basilica Ursiana at Ravenna (370–384), stands the octagonal baptistery, with a deep apse of the Ravennate type projecting on the east. This has been recently restored, and is quite devoid of ornament.

The cathedral of Grado is probably a work of the School of Ravenna, with contributory help from Greek carvers. For though, as we saw, the capitals of the nave columns, wrought expressly for this building, are to be ascribed to the Byzantine School, on the other hand the design and the construction of the church belong to that of Ravenna. This is made clear by the form of the apse; by the introduction of the typical decorative blank arcades, and the characteristic graduated bracket-like projections; and, lastly, by the use of narrow windows which, as our examination of the buildings has shown, were preferred by the builders of Ravenna in the second half of the VIth century for lighting their basilicas. I have not come across their application to an entire building in any Eastern church which I have seen, and ascribed, or possibly ascribed, to the same century as that which saw the erection of the cathedral of Grado.

Fig. 142.—Grado. Santa Maria delle Grazie. Capital in the Nave (VIth Century).

Granted the presence of Ravennate builders at Grado, we may reasonably attribute the construction of the small church of Santa Maria delle Grazie (Fig. 142), close by, to the same two sources. And this in spite of its having an apse flanked by two lateral chambers, and included with them in the rectangular end of the church. There was no occasion to get Byzantine builders, as Cattaneo[1] imagines, to import this arrangement into Italy, where, not to cite other instances, the Xenodochium of Pammachius at Porto, and the large Basilica of Santa Sinforosa on the Via Tiburtina near Rome, provided early examples of it.

* * *

When Narses was replaced as viceroy of Italy by the unwarlike Longinus (568), the misgovernment of the latter and the other exarchs who succeeded him, the religious strife which raged between the Church of Rome and the Church of Ravenna, the archbishops of which, strong in the Emperor's protection, had

[1] *Op. cit.*

assumed the title of Pope, and finally the dreaded invasions of the Lombards in the Exarchate, gradually deprived Ravenna of all power and splendour. The last blow was given by the Donation of Pippin (755), which resulted in the definitive subjection of the Church of Ravenna to that of Rome. The School of Ravenna, too, following the fortunes of the State, gradually fell into a condition of decay, until it finally disappeared to make way for the Lombardic School which was coming into being.

Fig. 143.—Ravenna. Guard-house of the Palace of Theodoric (VIIIth Century).

Owing to the distress of the times very few buildings exist which can be ascribed to the agency of Ravennate builders. All the same these buildings possess no small interest, both on account of certain new elements of construction and decoration which they contain, and also for the considerations which may be based upon them.

GUARD-HOUSE OF THE PALACE OF THEODORIC AT RAVENNA.—Recent operations have freed this building from later accretions and made it clear that the reputed remains of the palace of the great Gothic king are a later addition to the palace itself, made perhaps at the beginning of the VIIIth century by the exarchs, who, frightened by the spread of the Lombard power, and dreading a surprise attack, fortified themselves in the palace of Theodoric which had become their residence (Fig. 143).

The façade, constructed of materials taken from older buildings, is finished at either end by a massive angle-buttress crowned by a cornice forming a pediment. At the top they merge into arcades which form two blank hanging loggias. Between these the building advances in the centre, and in the lower part of this projection the entrance is formed, flanked on either side by an arcade of two arches supported by

a column. The marble jambs of the door, made up from various sources, though the carving on the imposts shows differences of execution between the two sides, still clearly belong to the same date, and are contemporary with the carvings in the neighbouring Sant' Apollinare Nuovo of the time of Theodoric. A round-headed niche is recessed above the door. The internal passage of the ground floor has cross vaulting supported by arches which spring from corbels. The upper story was reached by two corkscrew staircases formed in the two towers which flank the inner door.

The peculiarities worth notice, presented by this building, are the following:—

(1) The advancing centre of the façade, with the entrance door surmounted by an arched niche—an anticipation of the projecting porch of the door of a church with an open loggia above it, which we find in some Lombardic churches, *e.g.* the Cathedral of Modena (1099–1106)[1] which had Lanfrancus for its architect.[1,2]

Fig. 144.—Spalato. Palace of Diocletian. Golden Gate (about 300–305).

(2) The decorative feature of hanging loggias, probably borrowed from the pensile arcades which ornament the upper row of niches in the Golden Gate of Diocletian's palace at Spalato (Fig. 144).

(3) The vaulting supported by prominent transverse arches springing from corbels. This device, perhaps suggested by the arches springing from brackets which, as far back as the VIth century, the craftsmen of Ravenna had used for a decorative purpose on a sarcophagus in Sant' Apollinare in Classe, is an entirely new idea. For though, long before this, use had been made of transverse arches supported by corbels projecting from the main walls, and sometimes decorated on the outer face, as, for instance, those in the narthex of the basilica of Eski-Djuma at Salonica, on which a simple cross, or a cross in a wreath with a dove on either side, are carved, still such arches were only intended to carry flat ceilings.

THE CHURCH OF SANTA MARIA IN VALLE AT CIVIDALE IN FRIULI consists of a square chamber under 20 ft. wide, with a cross vault (Fig. 145). At one end of this is the presbytery, divided into three small chapels by four columns and two

[1] Muratori, *Rerum Ital. script.—Translatio corporis S. Geminiani.*
[2] Bortolotti, *Antiche vite di San Geminiano.*

pillars carrying architraves, from which spring three barrel vaults. The capitals of these columns are Byzantine Corinthian, showing both in design and execution a certain reversion to the classical manner. This tendency appears in the treatment of their upper part, and also in the manner in which the wild acanthus foliage which decorates them is carved.

Fig. 145.—Cividale. Santa Maria in Valle (762-776).

The sanctuary is separated from the church by a low marble screen, and a wooden beam supported by two small pillars with Byzantine Corinthian capitals showing two rows of leaves of the *acanthus spinosus*, treated in the same style of carving, midway between the Roman and Byzantine, as the larger capitals in the sanctuary.

The exterior of the walls of the church is decorated in their upper part with blank arcading, every section of which contains a round-headed window. The sanctuary is lighted by three arched windows smaller than the others.

As to the date of Santa Maria in Valle, very different views have been put forward by archaeologists and art-historians. So great is the discrepancy that, while some think that we have to deal with a classical building, probably a temple, to which the sanctuary was added in the time of Pertrudis, wife of the Duke of Friuli, to whose piety also are to be ascribed the stucco decorations which are one of the attractions of the interior of the church, others, on the contrary, argue that the building which we see was entirely built and decorated by order of this lady, while another view is that it is the result of a rebuilding in the XIth or XIIth century.

I am unable to give my adhesion to any of these theories, for a careful examination of the structure, and comparison with a number of other works of art, have led me to quite different conclusions. My view is that the existing building was erected by order of Pertrudis (762–776), and is the work of Ravennate builders. The unbroken continuity of the walls of the nave and sanctuary proves that they are of the same date. And the decorative arcading on the exterior, with windows in each division, confined, however, to the side walls, as we have often seen in older Ravennate buildings, betrays the presence of craftsmen belonging to that School. The marble capitals, too, all of which, especially the smaller ones, are clearly the work of one and the same hand, reveal the decadent Byzantine manner modified by classical reminiscences, which is characteristic of the Ravennate carvers of the VIIIth century.

As to the vaulting of the nave, no plausible reason can be given why it should not be regarded, like the stilted barrel vaulting in the sanctuary, as the work of Italian builders of that period. With the sharp edges of its groins only maintained about halfway from the angle corbels on which they rest, and then growing flatter as they gradually rise to their intersecting point, the cross vaulting is, on the one hand, manifestly earlier than the XIth and XIIth centuries; while, on the other, it does not exclude the presence of Italian workmen, since, as we shall have occasion to see when dealing with the ecclesiastical buildings of the Carolingian epoch, Italian builders did not in every case betray that want of technical experience which many writers like to fancy that they displayed.

Later, possibly in the XIIth century, the front was rebuilt. In its construction the marble fragments were used which have now been removed, and are to be seen attached to the walls of the narthex. At the same time the stucco decorations were carried out which form one of the treasures of Santa Maria in Valle. In the VIIIth century there is absolutely no place for this rich, graceful, attractive decoration, with its bold modelling, its correct and natural outlines, completely underworked, which could not even have been produced in the Vth or VIth centuries, though this description of plastic decoration was highly esteemed by the artists both of Ravenna and Constantinople in that period. An example of a beautiful underworked moulding produced by the latter in that age may be seen in SS. Sergius and Bacchus at Constantinople (about 527).

CHURCH OF SANTA MARIA DELLE CACCIE AT PAVIA.—Of the original structure, founded by King Ratchis (744–749),[1] nothing was left a few years ago but a fragment of an aisle wall, decorated with blank arcading (Fig. 146) corresponding to the arcade of the interior. Above, it was finished off by a plain brick stringcourse which, with another course of the same kind, must originally have enclosed a saw-tooth cornice.

In one section of the arcading a large, recessed, unsplayed window opened,

[1] Romualdo, *Flavia Papia sacra*.

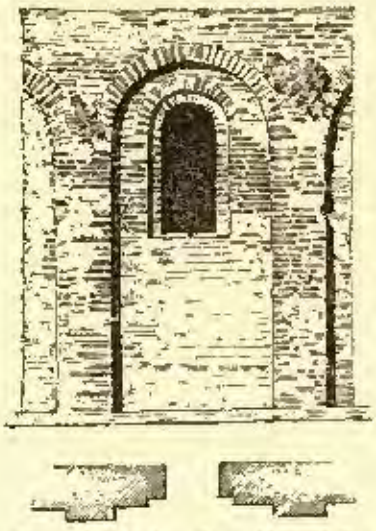


Fig. 146.—Pavia. Santa Maria delle Caccie (744–749).

not however of such wide dimensions as had been in use at Ravenna before the second half of the VIth century. The architect of Santa Maria delle Caccie in all probability came from Ravenna, inasmuch as the church was Ravennate in style, a fact which is shown by the decorative use of blank arcading on the outer walls of the aisles.

As we shall see presently, the Comacine guilds of the VIIIth century used to relieve the exterior of the side walls of the aisles in their churches, not with blank arcades, but with arched corbel courses divided into groups by lesenas. And the windows which they constructed in these side walls were invariably of very small dimensions, and splayed both inside and out.

* * *

We will conclude this chapter by dealing briefly with three very well known monuments of the Lombard period, the origin of which has given rise to very diverse opinions, but which I ascribe to craftsmen of the School of Ravenna.

The Tomb of Theodota.—The date of this sarcophagus (Fig. 147), which once contained the mortal remains of the Theodota who fell a victim to the passion of the Lombard king, Cunibert (688–700), is to be placed in the first half of the VIIIth century, or, more precisely, about the year 720. The two sides and one of the ends are preserved in the Museum at Pavia.

Its carvings, among which the two peacocks drinking at a two-handled vase surmounted by a cross may be compared with a similar subject carved on the

Fig. 147.—Pavia. Museum. Side of the Tomb of Theodota (about 720).

sarcophagus of John V, archbishop of Ravenna (about 725 or 742–752), in Sant' Apollinare in Classe (Fig. 148), are not to be set down as a work of the Comacine masters, or even the best of them, though executed in the capital of the kingdom of Lombardy. For the Comacine artists of the Lombard period, in their sculptured panels, show all the want of spontaneity of a craft learnt in the "laborerii," with the engraved lines of triangular section made by the chisel, and used indiscriminately in

all the ornamental and geometrical treatment of the parts not left plain, characteristics which are not found in the tomb of Theodota. Really the carvings are to be ascribed to artists of the School of Ravenna, among whom the decorative carving of panels in the VIIth and VIIIth centuries has nearly always a languid manner, and does not so often become mere cutting without any roundness of modelling; and even when it is so, there is not that clear-cut effect produced by the Comacine masters. The truth of this may be easily verified by anyone who understands the subject, if he will examine the carved sarcophagi of that period preserved in Sant' Apollinare in Classe. They may have come from the same hand as that which designed and executed the archivolts of the baptistery of Callistus at Cividale (VIIIth century).

Fig. 148.—Classis. Sant' Apollinare. Sarcophagus of John V (725 or 742–752).

With reference to this I may observe that we must not be surprised at finding in the carving of this tomb an art decidedly superior to that which we find in the carvings of the contemporary sarcophagus of Archbishop Felix of Ravenna (708–724), also preserved at Sant' Apollinare in Classe. The latter sculptures are regarded by many as evidence of the serious artistic decadence of the VIIIth century. But it is more than likely that, in the days of the famous Liutprand, the best carvers, as well as the best mosaic workers of Ravenna, emigrated to the adjacent kingdom of Lombardy, whither they were attracted by the considerable number of works in course of execution, some of them of an important character.

THE BAPTISTERY OF CALLISTUS IN THE CATHEDRAL OF CIVIDALE IN FRIULI was erected by Callistus, patriarch of Aquileia, after he had moved the see, in the year 730,[1] to Cividale. It was rebuilt after 1000, as is shown by the spurred base of one of the columns. Before this, it seems that it had been restored by another patriarch, Sigualdus (772–776).

Of the structure of Callistus there remain unquestionably the seven carved archivolts, as well as the eight capitals on which they rest, and perhaps some of the fragments of *plutei* with which the base of the erection is partly constructed (Fig. 149). Both in execution and design these archivolts are so close to the carvings of the tomb of Theodota at Pavia, that we might suppose them to come from the same hand.

[1] Gams, *op. cit.*

The capitals, midway between Corinthian and Composite, have two rows of acanthus leaves rather accentuated. These capitals, though very coarse in design and execution, nevertheless in the form of the leaves, and the way in which they are defined, point to the school which produced those in Santa Maria in Valle (762–776).

Of the period of the patriarch Sigualdus there survives a *pluteus* which forms one side of the base of the baptistery (Fig. 150). On this slab we find a design (a cross between two candlesticks, with palms and roses in the unoccupied space) which had been familiar to the artists of Ravenna from the VIth century onwards. We also meet with the other motive of a conventional tree ending in a kind of lily flower, with lions' heads issuing from its side branches. It had been already used, in the early years of the VIIIth century, in one of the long sides of the tomb of Theodota at Pavia (about 720). So that we shall not be far from the truth if we refer this *pluteus* to the same school.

Fig. 149.—Cividale. Cathedral. Baptistery of Callistus (VIIIth Century).

There may be observed in it a marked difference between the treatment of the conventional ornament, which is not without a certain grace, and the elementary way in which the animals are modelled, with the exception perhaps of the doves, and, still more, the manner in which the angel is represented. It would be impossible to imagine anything more clumsy and barbarous.

To the time of the same patriarch may be assigned the fragment of a *pluteus* showing two square compartments occupied by symbols of the Evangelists, and also another exhibiting a wheel of lilies, closely related to some marble carvings in Santa Maria in Valle, though the latter are the expression of a better ornamental design.

It must clearly have been a carver of the same school who produced the altar executed for the Lombard king, Ratchis (744-749), and still to be seen in

Fig. 150.—Cividale. Cathedral. Baptistery of Callistus (VIIIth Century).

Fig. 151.—Cividale. San Martino. Altar of Ratchis (744-749).

the church of San Martino (formerly San Giovanni Evangelista) at Cividale (Fig. 151).

The carvings at Pavia and Cividale which we have just examined suggest a few comments. Many fancy that they are the productions of Greek chisels.

In formulating, however, this opinion, they have not only taken no account, in the case of carved panels, of the style of composition and technical execution characteristic of the Byzantine School at that period (a subject that will occupy us when we come to deal with Pre-Lombardic carving, and endeavour to dissipate another myth about Byzantine art and artists in Italy), but they have also disregarded various reasons pointing in an opposite direction, which I will forthwith state.

First and foremost, it is inconceivable that the Lombards should have availed themselves of the services of Greeks for the buildings which they erected, or indeed have entrusted any kind of work to them, because, as Cordero[1] rightly

Fig. 152.—Corneto Tarquinia. Archaic Etruscan Carving.

observes, the Greeks were the sworn enemies of the Lombards; they were hardly ever at peace with one another; and the Lombards always preferred to employ the artistic services of their own subjects rather than those of a hostile people. By this preference they secured two things. They made it impossible for the Eastern Empire to employ Greek artists as political emissaries, and they demonstrated to their Italian subjects that the rule of their Northern masters was not only less cruel and rapacious than that of the Greeks, but that even the arts prospered under it.

On the other hand, it was quite natural that the Lombards, anxious as they were to get possession of Ravenna, especially in the time of Liutprand, who captured and held it for a short period, should, with a certain amount of worldly wisdom, engage the services of the craftsmen of the place. And it is easy to understand that, after Aistulf (749–756: like Ratchis, a son of Pemmo, Duke of Friuli) had once more taken Ravenna (752), thus putting an end to Greek rule in the Exarchate, and up to the day when the Lombards were compelled by King Pippin to abandon for ever their newly conquered territory (755), the artists of Ravenna contributed their skill to the execution of the works ordered by the

[1] *Op. cit.*

Lombards within their dominions. Again, it is reasonable to suppose that these artists, brought into contact with the members of the Comacine gilds, became familiar with them, and were associated with them for some time in the execution of important works. Lastly, it must be realised that the features which these writers regard as constituting the Byzantine style, and therefore indicating the presence of Greek carvers, were no foreign importation, but rather a new creation of the artists of Italy, suggested by models provided by the ancient monuments in the peninsula, and adapted to new times and new needs, if indeed they were not due to their unaided invention.

Fig. 153.—Rome. Lateran Museum. Mosaic (IIIrd Century).

Thus, for instance, the motive of squares enclosing figures of saints, symbolical animals, birds, fish, &c., obviously owes its origin to the design of squares formed by cable mouldings containing goats, horses, lions, telamons, flowers, winged sphinxes, stags with animals on their backs biting their necks, animals pursuing one another, various kinds of birds, gorgons, sea-horses, minotaurs, &c., used by the Etruscans for decorative purposes, and to be seen among the archaic sculptures at Corneto Tarquinia, either preserved on the spot (Fig. 152) or else transferred to the Archæological Museum at Florence. Another source may be the scheme of compartments with human figures, birds, fish, knots, &c., sometimes employed by the Romans in mosaic work (Fig. 153).

The motive, again, of griffons and animals biting themselves, and of large fishes attacking small ones, which Cattaneo[1] would bring to Italy as an importation from the East in the VIIIth century, was really imitated from Roman work. In particular, precisely the latter form may be seen represented in the spandrels of a shrine from Todi in the Galleria Lapidaria of the Vatican Museum[2] (Fig. 154).

The most striking characteristic of VIIIth century carving, interlacing, had been

[1] *Op. cit.*

[2] Amelung, *Die Sculpturen des Vaticanischen Museums.*

used by the Romans not only on vases and domestic utensils, but also in architectural decoration, as also, and more particularly, in mosaics. This may be verified by any-

Fig. 154.—Rome. Vatican Museum. Aedicula.

one in museums, in the early Christian Catacombs, and in buildings of the Imperial age. And before the Romans it had been used by the Etruscans.

Again, for such ornamental motives as roses, rosettes, whorls, stars of six or eight points, lilies, pellets, round arches intersecting so as to produce pointed arches, the

Fig. 155.—Ravenna. San Francesco. Sarcophagus (IVth Century).

bead and reel ornament, vine branches laden with grapes and birds pecking at them, &c., it is Roman monuments which provide the earliest models in Italy.

The favourite scheme of the Ravennate sculptors, a colonnade, or isolated arches, very interesting specimens of which are found on a IVth century sarcophagus in San

Francesco at Ravenna (Fig. 155), and on some of the sarcophagi in Sant' Apollinare in Classe, framing at first figures of the Redeemer and the Apostles, and later, crosses, wreaths, palms, sheep, doves, &c., was suggested by the sarcophagi with colonnaded fronts, which made their appearance in Italy in the first centuries of the Christian era.

Finally, the motive of "cauliculi" or slender volutes, which the Comacine masters were the first to use at the tops of ciboriums and arcaded altar frontals, is nothing but a decadent reminiscence of the Etruscan and Roman recurring volute ("corridietro").

CHAPTER II

THE COMACINE MASTERS

THE expression "magistri Comacini" appears for the first time in the code of the Lombard king, Rotharis (636-652), where, in the laws numbered CXLIII and CXLV,[1] they figure as master masons with full and unlimited powers to make contracts and sub-contracts for building works; to have their *collegantes* or "colleagues"—partners, members of the gild or fraternity, call them what you will—and lastly, their serfs (*servi*) or workmen and labourers.[2]

Many and various are the views of writers, both in Italy and outside it, with regard to the etymology of the name. The most plausible theory is still that which derives it from the diocese of Como, including, as it did in those days, the districts of Mendrisio, Lugano, Bellinzona, and Magadino.

This corporation of architects, builders, carvers, and workmen, rather less than a century later, forms the subject of the "Memoratorio de mercedes Comacinorum" or schedule of pay of King Liutprand (712–744),[3] which provides some interesting data for the history of architecture in Italy owing to certain enactments contained in articles CLVIII, CLX, and CLXII, and relating, not only to architecture, but also to carving, as the last mentioned article shows.

The origin of the Comacine masters in the diocese of Como is explained quite naturally, according to De Dartein,[4] Merzario,[5] and others, by the custom, which has always existed among the craftsmen and workmen of that region, of leaving their native places in order to betake themselves in gangs wherever building works are about to be or have been begun, urged thereto by their barren mountain soil, pecuniary gain, their innate ability and enterprising character. Another explanation is to be found in the presence on the shores of the lakes of Como, Lugano, and the Maggiore, of numerous stone, marble, and timber yards, which furnish building material for the cities of the plains. These yards gave scope for the practice of the crafts of carver, carpenter, builder, &c.; and these, in their turn, by constant practice and continuous progress, ultimately developed architects and sculptors.

And here we may naturally feel surprise at the appearance, amid the darkness of the early centuries of the Middle Ages, of a corporation of craftsmen who, though of Roman origin, none the less enjoyed Lombard citizenship and the rights belonging to it; while the Roman or Italian subjects of Lombard rule were, if not slaves, nothing better than "aldi," that is to say midway between freedmen and serfs manumitted

[1] *Historiae patriae monumenta edita jussu regis Caroli Alberti—Edicta regum Langobardorum—Edictum Rotharis regis.*

[2] Troya, *Codice diplomatico longobardo.*

[3] *Hist. patriae mon.—Edictum Liutprandi regis.*

[4] *Op. cit.*

[5] *I maestri comacini.*

on the condition of performing the manual tasks assigned them by the manumittor. A corporation too, which had a legal monopoly of public and private building work within the territories occupied by the Lombards, as the Code of Rotharis proves, and can claim the honour of filling up the gap which for so long was believed, especially by non-Italian writers, to exist between the incorporated artisans of the Roman epoch, supposed to have vanished with the fall of the Empire, and the gilds of craftsmen which sprang up so luxuriantly in the XIIIth and XIVth centuries.

Such surprise, however, may easily be allayed if we consider that in reality the fraternity of craftsmen, in Italy at least, by no means came to an end with the Barbarian invasions,[1] and particularly that of the Lombards, who actually preserved those Roman institutions which best fulfilled their aim of keeping the conquered people in subjection. Accordingly, they would have maintained the corporations of artisans, in order to make the exaction of tribute easier, and at the same time to be able to keep a hold over the individuals composing them.[2]

It has been pointed out, on the strength of a passage in Cassiodorus, that, under the Goths, there existed magistrates attached to the corporations connected with the supply of corn, a fact which suggests that the Roman system was preserved under the Barbarian dominion. Two letters of Gregory the Great (590–604) prove the existence, at the close of the VIth century and the beginning of the VIIth, of a corporation of soap-makers at Naples, and of another of bakers at Otranto. Gregorovius[3] states that, in the time of Pope Hadrian I (772–795), not only did there exist in Rome the associations of *milites*, *peregrini*, notaries, and the Papal singers, but that there must also have been others of doctors, craftsmen, traders, and workmen of every description.

Hence we have good grounds for inferring that the corporation of "Comacini," who apparently were neither more nor less than the successors of the master masons who in the days of the Empire had directed the operations of the *collegia* specially devoted to building, survived the barbarian invasions which were so disastrous to Italy in the centuries preceding the accession of Rotharis to the Lombard throne. This view is confirmed by the undoubted fact that from this time onwards the "Comacini" formed a very important gild, as is shown by the need which he felt of making regulations for it in his laws. This gild cannot have sprung into existence full grown, and, as it were, by magic, just when the Code of Rotharis made its appearance in 643. It must have already been in existence, and have attained some degree of importance, well before Alboin's descent on Italy (568). Troya,[4] in fact, remarks that when the Lombards of the time of Autharis (583–590) and of Agilulf and Theodelinda (590–625) wanted to erect buildings, they must have made use of it; and that everything leads one to think that before the promulgation of the Code of Rotharis some of the members (*i.e.* those of the highest capacity and reputation) had already been enfranchised by "impans" or express grace of the king. However that may be, the mention of the associations of Comacini in the reign of Rotharis and Liutprand is one of the earliest in the Barbarian world, and earlier than that of any gild of architects or builders belonging to the Middle Ages.

We know nothing about the organisation of these associations, and any statements made by writers with reference thereto are mere conjectures. The same may be said of various terms connected with them, such as the "laborerium," the "schola," and the "loggia," "loya," or "loia"; for these names only made their

[1] Leo, *Storia degli Stati Italiani*.
[2] Orlando, *Delle fratellanze artigiane in Italia*.
[3] *History of the City of Rome in the Middle Ages*.
[4] *Op. cit.*

appearance after the year 1000.[1] Nor have we any documents to show whether Charles the Great (768–814), after becoming king of the Lombards (774), maintained, diminished, or abrogated the rights or privileges bestowed on the Comacini by the Code of Rotharis and the "memoratorio" of Liutprand. Amico Ricci,[2] indeed, states that the Popes, after the removal of the fears inspired by the Lombard dominion, not only confirmed to the Comacine masters the privileges which they had obtained in their own country from the Italian kings, but further secured those privileges for them in all the Catholic countries whither they were led by the objects of their associations. He goes on to assert that in the Empire of Charles the Great these associations were exempted from obedience to every local law, statute, and obligation, and were also empowered to fix the scale of payments, and in their chapters-general to settle without interference everything connected with their internal government. But these assertions find no confirmation either in Papal Bulls, the Acts of the Carolingian kings, or in the best known annalists.

Another piece of mere hypothesis is the idea of those who, with the same writer, argue that in the days of Charles the Comacine masters formed themselves into closer unions, with their own peculiar regulations and ceremonies kept as a profound secret; that they began to be called "free" or "frank masons," and that from these associations were derived the societies specially known as Freemasons, who spread through Italy, Germany, Switzerland, Provence, Spain, England, and Scotland, and were the origin of the Masonic Lodges, at first composed solely of architects, builders, and the workmen associated with them.

Nor can anything better be alleged for the theory that, after the fall of the Lombards, the Comacini founded a "School" at Rome with the object of sending not only their younger, but also the older members there, to study the surviving monuments of the ancient world. A confirmation of this is supposed[3] to exist in the fact that the "Liber Pontificalis" describes how, when Pope Leo III (795–816) returned to Rome after taking refuge with the Duke of Spoleto, there came forth to meet him at the Milvian Bridge the "Schools" of foreigners in Rome: "scole peregrinorum, videlicet Francorum, Frisonorum, Saxonorum, atque Langobardorum."[4] It is true that Gregorovius[5] finds that, at the end of the VIIIth century, there were in existence at Rome, besides various local associations, the "Schools" of foreigners—"Scholae Peregrinorum"—an institution of a different kind. He also notes that the oldest of these foreign corporations was that of the Jews—"Schola Judaeorum"—in the Trastevere; next in order came that of the Greeks—"Schola Graecorum"—which had its centre near Santa Maria in Cosmedin; and, lastly, came the "Schola Saxonum," the "Schola Francorum," the "Schola Frisonum," and the "Schola Langobardorum." But we are also told that the "Schola Saxonum" founded by the King of Wessex, when he came on pilgrimage to Rome in 728,[6] had as its object the instruction of Saxon chiefs and people in the Catholic faith, from which it may be inferred that the "Schola Langobardorum," which is believed not to have been instituted till after the fall of King Desiderius (774), had a similar purpose. The same view is taken by Dyer,[7] who thinks that the Scholae Francorum, Frisonum, Langobardorum, and also the Schola Saxonum

[1] Merzario, *op. cit.*
[2] Merzario, *op. cit.*
[3] *Op. cit.*
[4] *Storia dell' architettura in Italia dal secolo IV al XVIII.*
[5] Duchesne, *Le liber pontificalis.*
[6] *Rerum Britannicarum medii ævi scriptores.—Rolls Series—The Anglo-Saxon Chronicle.*
[7] *A History of the City of Rome.*

were originally intended solely for the religious instruction of the nations to which they belonged, but that they disappeared between the IXth and XIth centuries, or at least shrank into mere hostels for the reception of poor pilgrims, and burying places for the respective nations. On these "Scholae" and their churches an important study has lately appeared.[1]

Whatever may have been the organisation of the Comacine or Lombard gilds, and however these may have been affected by outward events, they did not cease to exist in consequence of the fall of the Lombard kingdom. With the first breath of municipal freedom, and with the rise of the new brotherhoods of artisans, they too, perhaps, may have reformed themselves like the latter, who were nothing but the continuation of the "collegium" of Roman times preserving its existence through the barbarian ages, and transformed little by little into the mediaeval corporation. The members may have found themselves constrained to enter into a more perfect unity of thought and sentiment, to bind themselves into a more compact body, and thus put themselves in a condition to maintain their ancient supremacy in carrying out the most important building works in Italy. But we cannot say anything more. And even putting aside all tradition, the monuments themselves are there to confirm what we have said.

Finally, towards the end of the XIth century, the Comacine brotherhoods began to relax their bonds of union, to make room gradually for personality, and for artistic and scientific individuality, till at length they vanish at the close of the XVth century with the disappearance of the Lombardic style which they had created, and the rise of the architecture of the Renaissance.[2]

[1] P. Ehrle, *Ricerche su alcune antiche chiese del Borgo di S. Pietro.*

[2] *Archivio storico dell' arte*, Anno II.—Carotti, *Vicende del duomo di Milano.*

CHAPTER III

THE PRE-LOMBARDIC STYLE

FROM THE REIGN OF AUTHARIS TO THE FALL OF THE KINGDOM OF LOMBARDY

AS late as the reign of Autharis (583–590), the Lombards and other Northern barbarians who had descended upon Italy in the year 568, did nothing but plunder the churches belonging to the conquered people whose cities they destroyed. Paulus Diaconus[1] supplies us with the evidence of the fact, and the comments of Troya[2] on the CCXLVIIIth law in the Code of Rotharis (636–652) vouch for its truth. Autharis, indeed, began some constructive work; but he was prematurely carried off by poison, and his church at Fara Bergamasca, erected for Arian as opposed to Catholic worship, is the only building which history records as erected by his order. Brighter days, however, were in store for art.

On the death of Autharis, his widow Theodelinda (590–625) imposed her own form of creed on the Court, induced her second husband Agilulf (590–615) to embrace it, and their son Adaload was also baptised in it. Thereupon the whole Lombard nation, following the example of its rulers, was received into the Roman Church, and religious zeal soon multiplied the number of places of worship and monasteries. The queen took the lead in these works of piety, and may be truly said to have rekindled in the districts subject to Lombard rule the dying embers of the Fine Arts. In fact, though it is impossible to believe that all the ecclesiastical or even secular buildings attributed by tradition to her or to Agilulf were actually due to them, still the number which may be accepted as such is considerable. And after Theodelinda there was not a single Lombard sovereign, whether Arian or Catholic, that did not help by means of some work or other to keep alive, so far as was possible in that age of barbarism, the spirit of the Fine Arts, and more particularly architecture, for the practice of which they provided frequent opportunities.

It is true that the *Liber Pontificalis*[3] describes the Lombard kings as "protervi," "perfidi," "pestiferi," "atrocissimi," "sceleratissimi," "crudelissimi," and so forth. Yet one of the kings, Liutprand, had natural instincts of piety and virtue which were not, according to some historians, Prof. Oman[4] among them, the least efficient cause of the evils which Rome was at that time on the point of bringing upon Italy. For the Papal biographer forgot that it was he who, by first taking the town of Sutri and then presenting it to the Pope, laid the foundation of the Temporal Power. However, epithets such as we have quoted are powerless to obliterate the memory of the numerous religious buildings due to the piety of the kings themselves or of their officials.

[1] *Mon. Germ. Hist.—Pauli historia Langobardorum.*
[2] Duchesne, *Le liber pontificalis.*
[3] *Op. cit.*
[4] *The Dark Ages.*

This piety perhaps had its origin in policy. Indeed, not a few students of Lombard history hold that many of their princes regarded the restoration of old churches, and still more the building of new ones, as an instrument of government, the intention being to satisfy the people by these displays, and make them see that, if their new masters were steadily pressing the Papacy closer and closer, they were at the same time indefatigable supporters of the religion of their conquered subjects. But if this is so, it must be also conceded that it was not religious devotion but cool political calculation that led Charles the Great ("the most benignant," "the most excellent," "the most Christian king," as he is called by the Papal biographer cited above) and his heirs to make donations and grant privileges to the clergy and monasteries.

Of the buildings erected by the Lombards during their sway in Italy, and definitely recorded by Paulus Diaconus, as well as of those which are or can be assigned to that period on the strength of documentary evidence, or historical notices, or tradition, either not one stone remains upon another, or else a remorseless criticism and recent discoveries have disposed of their claims in such a summary manner that hardly one has survived the ordeal.

For example, among the instances of buildings, religious as well as secular, brought forward by Cordero,[1] who, we may remark, was the first to demonstrate by his fearless criticism the untenability of the dates freely assigned in his day to structures belonging to the Middle Ages, the only one that has not been struck off the list is the church of San Salvatore at Brescia. Again, of those cited by De Dartein[2] two only, the churches of Santa Maria delle Caccie at Pavia, and San Salvatore at Brescia, are at present recognised as belonging to the same period. To them I have now added a third, Santa Maria in Valle at Cividale. Later, I shall add two more: the parish church of Arliano near Lucca, and the basilica of San Pietro at Toscanella.

More fortunate have been the buildings dealt with by Cattaneo,[3] viz. the churches of Santa Maria delle Caccie at Pavia (744–749), San Salvatore at Brescia (753), and the church at San Giorgio in Valpolicella (712–740). And the same may be said of the church of Santa Teuteria at Verona, consecrated in 751[4] and remodelled in 1160 when it was re-consecrated, with the addition of the present cupola, a fact which I was able to verify when the masonry was recently laid bare. The antiquity of the first two has now been admitted, and the others have not yet fallen under the blows of criticism, or, what is more important, the logic of facts.

Of the buildings accepted by all critics alike, San Salvatore at Brescia is still the one which, by common consent of the best authorities, is regarded as the most important, and for the following reasons. It remains very nearly in its original condition; it is the only one, informed by a single idea, which exhibits the workmanship and the style of the Lombard age; and, lastly, it would not be easy to discover other buildings presenting these characteristics.

Nevertheless, the results of my own studies and researches are not in complete agreement with these views. Indeed, I believe that San Salvatore at Brescia has been given an importance which it does not really possess, and that there are two other buildings in which archaeologists and art-historians might have found a much safer guide for information as to the architectural characteristics of the period. These are the basilica of San Pietro at Toscanella, and the parish church of Arliano near

[1] *Op. cit.* [2] *Op. cit.* [3] *Op. cit.*
[4] Biancolini, *Notizie storiche delle chiese di Verona.*

Lucca. They mutually supply one another's deficiencies, for the one can show those parts of the original structure which are wanting in the other, where they have been destroyed or tampered with; and they provide a reliable example of the architectural style in general use in the districts subject to Lombard rule.

To this style I give the name of "Pre-Lombardic"; and I do so, not because I want to invent a new appellation for the family which includes the monuments not only of the Lombard period, but also those erected in the regions occupied by the Lombards during the two centuries preceding the year 1000. The reason rather is that these monuments, while owing something to the Roman and Romano-Ravennate styles—for we find in them the organic construction of the former and the decorative motives of the latter—at the same time present features both constructive and decorative which are foreign to those styles. These features are absolutely new, and form marked characteristics of the style of the later Lombardic basilica which afterwards influenced all the Christian architecture of central and northern Europe.

This Pre-Lombardic style originated under the Lombard rule. Slowly but surely, through the influence of Roman, Romano-Ravennate, and Byzantino-Ravennate architecture on the Comacine or Lombard masters, with the addition of certain new elements which formed part of their natural inheritance, it advanced toward the "Lombardic" style, properly so called, of which it was the precursor, and for which it prepared the way. And in all its phases it represents the development of the style which, after attaining its completion in Lombardy in the course of the XIth century, spread over so many regions of Europe, where it exercised undisputed sway until the "Pointed Style" came to supplant it.

Fig. 156.—Pavia. Crypt of Sant' Eusebio (VIth or VIIth Century).

Having said so much by way of preface, we will now turn to examine, in chronological order, the three buildings referred to. Only, there is a fourth which we ought to take before them, the crypt of the church of Sant' Eusebio at Pavia; for though it is not so old as the Lombard period, it contains valuable evidence about the carving of that age.

CRYPT OF THE CHURCH OF SANT' EUSEBIO AT PAVIA.—We know from Paulus Diaconus that the original basilica of Sant' Eusebio, the foundation of which is assigned to a time earlier than the Lombard dominion,[1] was in existence in the days of Rotharis (636–652) and dedicated to Arian worship. The latter circumstance is an argument for the rebuilding or radical restoration of the church in the reign

[1] Romualdo, *op. cit.*

of Autharis (583–590), the unflinching champion of Arianism. What is certain is that the building of the time of Rotharis was not the original one, for it is impossible to believe that, previous to the descent of Alboin (568), the art of carving in Italy had fallen to the degraded level which produced the results to be seen in the crypt, the only part of the church which escaped the rebuilding in the early years of the XVIIIth century.

This crypt (Fig. 156) is a small basilica, properly orientated, below the apse and presbytery. It has cross vaulting with visible arches. Two of the bays at the end,

Fig. 157.—Pavia. Crypt of Sant' Eusebio. Capital (VIth or VIIth Century).

Fig. 158.—Pavia. Crypt of Sant' Eusebio. Capital (VIth or VIIth Century).

beneath the apse, have ribs, so that they must be later than the year 1000. The vaulting springs from wall piers and six isolated columns, some of tufa, the others of marble taken from older buildings, with four others which have been made for their present position. The latter are square in section with the corners rounded off, and form one piece with the capital which has the shape of an inverted truncated pyramid. In every instance the base is buried beneath the surface.

All the columns, those that have been brought from elsewhere as well as those specially made with capitals in one piece, carry very barbarous marble capitals with, at each angle and on each face, an unribbed leaf, rude and stiff (Fig. 157); or else a simple hollowing out at the angles; or, thirdly, a row of leaves like those first described, with a similar row below them, those at the angles being inverted (Fig. 158).

These capitals, two of which, viz. those with the lower leaves at the angles inverted, have in their design no counterparts among the many and varied capitals of the Pre-Lombardic style which are known to me, proclaim themselves as the work of one hand, and were obviously made for the crypt of the first church and then used

over again when, in consequence of the famous earthquake of 1117, so many churches in Pavia were, as I believe, restored or rebuilt. Or the reconstruction may have taken place when, at some time after the epoch of 1000, it was desired to raise the level of the presbytery, thus giving more space to the crypt; the result being obtained by rebuilding the vaulting on stilted arches and, presumably, raising the pavement of the crypt.

Their design and execution are so rude that they seem archaic beside the barbarous but still superior Pre-Lombardic capitals of the VIIIth century; so that I think we shall not go far wrong if we assign them to the period between 583, the year in which Autharis ascended the throne, and the reign of Rotharis (636–652). They tell us how carving had degenerated during the first half of the VIIth century in the lands subject to Lombard rule, and how rude and unskilful were the artists produced by the Comacine gilds at that period. At the same time they reveal the fact that a new art was coming into being, showing itself at first in a somewhat timid and barbarous guise, but always original. It was the mission of this new art to replace the Ravennate and Byzantine styles in Italy.

PARISH CHURCH OF ARLIANO NEAR LUCCA.—The church of San Martino at Arliano has not, so far as I know, been hitherto noticed in the history of art.

Fig. 159.—Arliano. Parish Church (712–744).

The precise date of its erection is not known. It is mentioned, however, as early as 892 in a document which speaks of it as a parish church existing from an indefinite period.[1] At the same time, its construction and architectural decoration, compared

[1] *Memorie e documenti per servire all' Istoria del Ducato di Lucca.—R. Accademia Lucchese di Scienze Lettere ed Arti.*

with those of the oldest churches of Lucca, the date of which is certain, point unquestionably to the time before the epoch of 1000. On the other hand, they appear archaic when compared with those of churches of known date erected in North Italy in the course of the IXth and Xth centuries, such as the parish churches at Agliate and San Leo, and the basilicas of San Vincenzo in Prato and San Celso at Milan. Hence we may place the church of Arliano in the Lombard period, and, by a process of elimination, after the erection of Sant' Eusebio at Pavia probably in the VIIIth century and the reign of that great church builder, Liutprand (712–744): "Hic gloriosissimus rex multas in Christi honore per singula loca ubi degere solebat basilicas construxit."[1] But it must be earlier than San Pietro at Toscanella, the architectural decoration of which shows an advance beyond that at Arliano. It is a basilica with nave and two aisles separated by four rectangular piers, from which spring round arches. At the eastern end of the nave, and starting immediately from its termination, is the semicircular apse. It is worth while mentioning that the plan has not the oblong shape common to churches of the old Latin type, but rather takes the form of a square, each side measuring about 55 ft. In the next place, the left aisle, like that of San Vittore at Ravenna, is wider than the right. The origin of this inequality is perhaps to be found in the fact that, the former being assigned to the women, it was found necessary to give them more room than the men, who according to the Roman rite, had their places in the south aisle, known as the "pars virorum."

Fig. 160.—Constantinople. Inner face of the Golden Gate (408-450).

Originally both nave and aisles had open timber roofs, but these have been replaced by more recent vaulting. At the same time, I suppose, the existing piers

[1] *Mon. Germ. Hist.—Pauli historia Langobardorum.*

were constructed by encasing the original supports, probably columns taken from older buildings, and thus giving them the form of piers.

Externally, the facing of the walls consists for the most part of coursed and worked stones of various dimensions, evidently taken from some older building.

Fig. 161.—Arliano. Parish Church. Apse (712–741).

The front (Fig. 159), almost untouched in spite of its age—a condition presented by no other church of the Lombard period, is turned towards the west, and has three openings for the doors corresponding to the nave and aisles, which are, moreover, indicated on the outside by two lesenas projecting from the façade. The

middle door, the jambs of which have been rebuilt, is strictly rectangular, and the lintel is relieved by a round arch in which is sunk a lunette wider than the opening of the door itself. This arrangement, containing in itself the germ which, when developed in course of time, produced the typical Lombardic portal, suggests a few comments.

The rectangular doorway with its lintel relieved by an open arch is a fairly ancient invention. Examples of it are to be found in the Forum of Augustus at Rome, finished in 2 B.C.[1] The idea, too, of a rectangular doorway surmounted by a monolithic lunette flush with the wall, an instance of which is offered by an Etruscan tomb at Cortona,[2] is also old. Of Roman date is the arrangement of a doorway surmounted by a recessed lunette. Early instances of this, occurring in decorative forms, are afforded by certain sepulchral monuments in Phrygia, believed to belong to the age of the Antonines[3] or even earlier.[4] Very early specimens in actual construction are to be seen on the inner face of the Golden Gate (Fig. 160), and in the Gate of Rhegium, in the Theodosian Walls of Constantinople, which are dated by Van Millingen[5] in the reign of

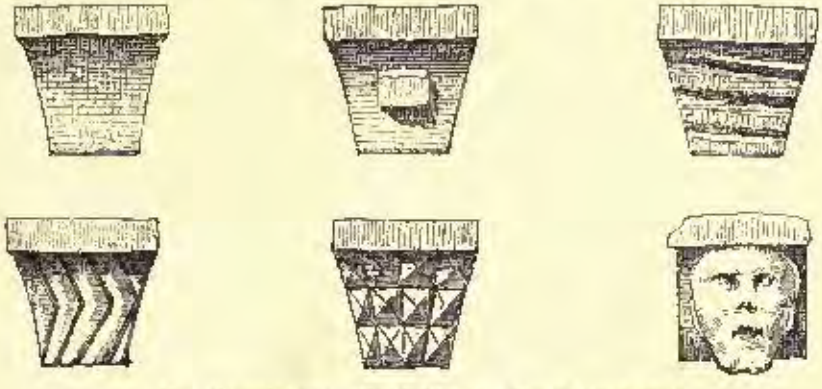


Fig. 162.—Arliano. Parish Church. Corbels (712–744).

Theodosius II (408–450). Each has a sunk lunette intended to hold an icon. In Italy, on the other hand, the oldest instance that I can cite of a square-headed opening crowned by a recessed lunette, is to be found in the windows of the mausoleum of Galla Placidia at Ravenna (about 440). So that its invention must be credited to the builders of the East.

The doorway with its lunette is set in a projection beyond the external face of the nave wall. The eaves cornice of the façade is composed of a continuous stepped arched corbel course, while lower down, at the sides, the walls are decorated with a similar course broken by lesenas. The latter form of decoration is also applied to the side walls, and to the east end of the church and its apse (Fig. 161). Some of the arches of these courses spring from corbels rudely carved with projections, striations, diamond faceting, and barbarous heads of living beings (Fig. 162). The walls of the church were originally pierced by very narrow round-headed windows splayed on both sides, and also by round openings and luminous crosses.

These figure corbels at Arliano show that the fashion, prevalent in the decadence of classical Roman art, of representing real or imaginary beings on the face of consoles supporting the topmost cornice of a building or the architrave of a door, in the manner,

[1] Lanciani, *The Ruins and Excavations of Ancient Rome.*
[2] Texier, *Description de l'Asie Mineure.*
[3] *Byzantine Constantinople.*
[4] Martha, *L'art étrusque.*
[5] Perrot et Chipiez, *op. cit.*

for instance, to be seen in the baptistery of the cathedral at Spalato (Fig. 163), which is believed to have been originally a temple dedicated to Jupiter Capitolinus,[1] but in

Fig. 163.—Spalato. Door of Baptistery (about 300–305).

any case formed part of the palace of Diocletian, and also on the Golden Gate of that palace, did not originate, as some think, with the birth of the Lombardic style, but was inherited by it from the Pre-Lombardic.

The use of consoles of this kind seems to have begun in the reign of Diocletian. From an anonymous drawing published by Hülsen[2] it appears that the travertine

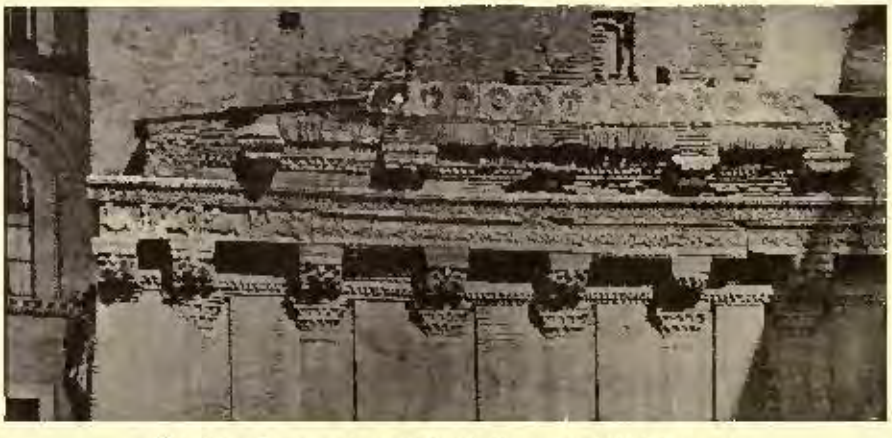


Fig. 164.—Rome. House of Nicola Crescenzio (XIIth Century).

consoles belonging to the pediment of the Curia of Diocletian at Rome, dating from the first years of the IVth century, were decorated with acanthus leaves and dolphins

[1] Jelić, Bulić e Rutar, *op. cit.*

[2] *Die Ausgrabungen auf dem Forum Romanum.*

with intertwining tails, modelled in stucco. Into the front and south side of the well-known house of Nicola Crescenzio (XIIth century) at Rome, popularly known as the house of Cola di Rienzo, or of Pilate, are built a large number of consoles taken from older buildings, and to be assigned to the last years of the IIIrd century and the early ones of the IVth (Fig. 164). Their faces are carved with figures, with or without wings, single or in pairs, and in some cases supporting an animal or a basket filled with fruit.

Secondly, the luminous crosses show that the Lombard builders had adopted this form as early as the VIIIth century. They borrowed it from Ravenna, where it had been used as far back as the first years of the VIth century in the mausoleum of Theodoric.

BASILICA OF SAN PIETRO AT TOSCANELLA.—With regard to the date of this church, the views of writers differ very widely. Thus, while Turriozzi[1] states that it is possible that the existing structure may go back to the middle of the VIIth century, Campanari,[2] on the other hand, thinks that it was erected in the IXth, and that towards the close of the next century it was enlarged by two bays and embellished with a façade. And while Promis[3] believes that it was not built before the XIth century, and Dehio[4] also considers that it belongs to that century, though the front was perhaps not finished till the XIIth, Robault de Fleury[5] asserts that it was in existence by the IXth, Lenoir[6] thinks that it was built about that time, and Gally[7] regards it as a work of about the middle of the VIIth century with the exception of the front, which he would place in the first half of the XIth. Amico Ricci,[8] again, while not committing himself to any definite statement about the foundation of the basilica, which may belong to the XIth century, inclines to believe that it was finished in the closing years of that century or, more probably, in the course of the next. Lastly, Gentile[9] argues that it was built at the end of the VIIth century or the early years of the VIIIth, and was then enlarged and decorated with a front at different dates between the end of the Xth century and the course of the XIIth.

This striking divergence of opinion is due to the fact that most of those who have dealt with this instructive monument have based their opinion on the convenient but fallacious evidence of the ritual of the Church. Campanari, for instance, decides the date of the building by its orientation; though in the IXth century the orientation of churches had become a matter of mere convenience. Or else they depend on arbitrary statements, or on the mistaken belief that Lombardic architecture was already fully developed in the period between the end of the VIIth century and the early years of the VIIIth; or on merely general or even erroneous historical considerations, or on that enthusiasm which sometimes stands in the way of scrupulous veracity; or, lastly, on the opinions of others, without taking the trouble to verify them.

So far as I can see, the history of this church—if not the true, at least the conscientious history—has still to be written. Let us attempt it.

The exact dates of its foundation and of its later additions are not known.

[1] *Memorie istoriche della città Tuscania che ora volgarmente dicesi Toscanella.*
[2] *Tuscania e i suoi monumenti.*
[3] *Trattato di architettura civile e militare di Francesco di Giorgio Martini.*
[4] Dehio und von Bezold, *Die kirchliche Baukunst des Abendlandes.*
[5] *La Messe. Études archéologiques sur ses monuments.* [6] *Architecture monastique.*
[7] *The ecclesiastical architecture of Italy from the time of Constantine to the XV century.*
[8] *Op. cit.* [9] *San Pietro di Toscanella* in *Archivio storico dell' arte*, Anno II.

Researches made by me on the spot were fruitless, for the local archives are silent on this point; and the documents, which might have thrown some light on the question, belonging to the abbey of San Giusto, the imposing ruins of which are to be seen near the town, have disappeared. Nor was I more fortunate in my perusal of the documents of the abbey of Monte Amiata,[1] or of the Register of Farfa.[2]

It is true that one of the two historians of Toscanella, Turriozzi,[3] states that, about the middle of the VIIIth century, the bishop's throne was moved from the church of Santa Maria Maggiore to San Pietro. Further, he tells how "there could be seen the leaden seal authenticating the translation of the relics of the martyr saints, Secundianus, Verianus, and Marcellianus, in the year of our Lord 648: † *Anno Domini CCCCCCXLVIII. Ind. VI. corpora sanctorum martyrum Secundiani, Marcelliani, Viriani, & Deodati a domo sanctorum traslata sunt in civitatem Tuscanam.*" These facts, if true, would be of first-class importance for us because, although I am not one of those who think that a building must belong to a particular date merely on account of certain events directly connected with it, they might be brought into connection with the foundation of the oldest part of the church.

Unfortunately the date of the transfer of the bishop's chair is not certified by any authentic document. The bare fact is only known by what can be gathered from the well-known Bull of Leo IV (845-857), recorded by the two historians referred to, which confirms to Virobono, bishop of Toscanella, jurisdiction over all places subject to that diocese. That is to say, in 852, Santa Maria Maggiore, which in the past had been the principal church of the see, had ceased to be the cathedral, and was now a "pieve" or parish church ("... ecclesiam S. Dei genitricis semperque Virginis Mariae, quae olim caput episcopii extitit, et nunc plebs facta est ..."). The document, too, relating to the translation from Cencelli to Toscanella of the bodies of SS. Secundianus, Verianus, and Marcellianus, which misled Turriozzi, is considered to be apocryphal. All that is known about the translation is that it took place in early times, as we read in the "*Acta Sanctorum*"—"Utut est, possessio Tuscaniensium, quandocumque sit adita, certo antiqua reputari debet."[4]

There is, however, one last clue, and that is the presence at Toscanella in the time of the famous Liutprand (712-744), of the Comacine master Rodpertus, which is established by the well-known deed of sale (739) of property belonging to him in the Vicus Dianus and other places within the territory of the city.[5][6] Of this fact we must lay hold, remembering that the reign of Liutprand was long and prosperous, that it marked the zenith of the Lombard dominion, and that it was the most productive of buildings. Another reason is that San Pietro is in the same Pre-Lombardic style as the church of Arliano (VIIIth century); and lastly, various decorative details in the basilica unquestionably point to the first half of the VIIIth century.

In my belief the basilica of San Pietro as it stands to-day is the result of four distinct periods. To the earliest, that is to say the time of Liutprand, belongs the original church, comprising the east end and the three adjoining bays of the nave of the present building, with a crypt or "confessio" beneath, which has been rebuilt and enlarged at some later date. To the second period, *i.e.* the last years of the XIth century, are to be assigned the existing crypt below the presbytery, the raising of the floor of the original chancel, and the erection of the present ciborium over the high

[1] *Archivio della R. Società Romana di Storia patria*, Vol. XVI. Calisse, *Documenti del monastero di San Salvatore sul Monte Amiata riguardanti il territorio romano* (Secoli VIII–XI).

[2] *Il Regesto di Farfa di Gregorio di Catino* (Giorgi e Balzani).

[3] *Op. cit.*

[4] *De SS. Secundiano et Socc. MM.* Die Nona Augusti.

[5] Troya, *op. cit.*

[6] Brunelli, *Codice diplomatico toscano.*

altar. To the third, or middle of the XIIth century, are to be ascribed the extension in length of the primitive church, and the construction of the oldest portion of the façade. Lastly, to the fourth period, or end of the XIIth century, must be attributed the central portion of the front, and also the tessellated mosaic pavement in the central part of the chancel and in the nave.

Let us now examine the original church, which must be regarded as the best representative of the ecclesiastical architecture of Italy in the VIIIth century, and one of the most remarkable existing churches of the three centuries preceding the epoch of the year 1000 to be found not only in Italy but also in the countries beyond the Alps. It consists of a nave and aisles (Figs. 165, 167) separated by four columns and two piers with engaged columns surmounted, with one exception, by capitals which in their rudimentary form show the Pre-Lombardic cubical type. The columns themselves, one of which has been renewed, have been taken from older buildings like their capitals, which carry heavy pulvins. The columns are connected by a low wall with a continuous seat, forming the division between the nave and the aisles. The nave arches are of various dimensions. They are ornamented with dentils in the form of parallelopipeds: a decorative motive which, though rude, is none the less original and very effective. I have not met with it in any church older than the period about the year 1000 that I have seen.

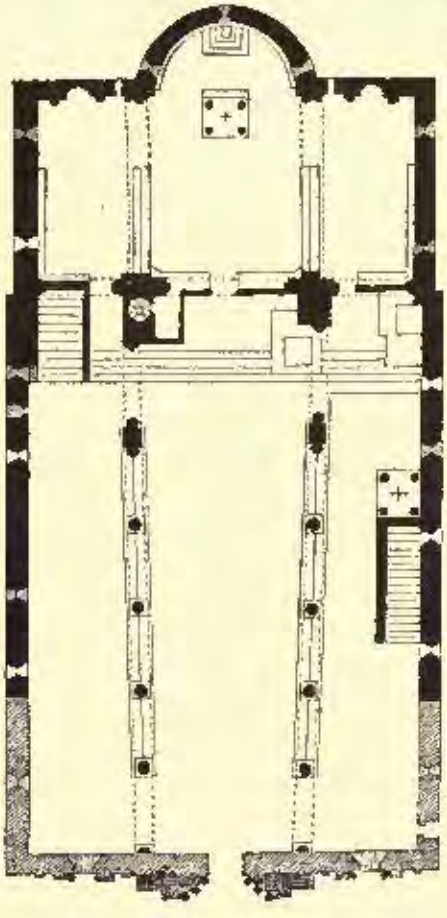


Fig. 165.—Toscanella. Plan of San Pietro.

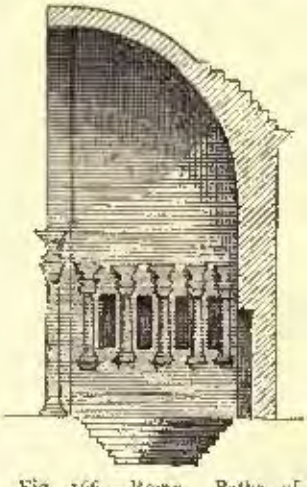


Fig. 166.—Rome. Baths of Titus (79-81). (*From Palladio, "Le terme di Roma."*)

The walls of the nave are finished off on the inside by a range of blank arches, with shafts carrying small cubical capitals. These arches recall the range of shafts resting on consoles and intended, besides providing supports for the beams of the roof, to decorate the upper story of the walls in the nave of the basilica at Kalb-Lauzeh (VIth century). These latter shafts, in their turn, recall the colonnettes supported on corbels which were used to decorate some of the halls in the Baths of ancient Rome: for instance the Baths of Titus (79-81) (Fig. 166).

This blank arcading ought to be noticed, for later, *i.e.* in the course of the XIth century, passages were made in it, and so it became the source of the internal

arcaded wall galleries which are a characteristic feature, and an original one, of the Lombardo-Norman style. This is the earliest specimen that I can adduce of this form of decoration. There is, indeed, the basilica of Eski-Djuma at Salonica (Vth century), which orginally showed, high up, corresponding to the women's gallery, arcades with recessed arches (Fig. 168) supported (1) by small piers with engaged columns which carry low capitals elliptical in section, ornamented on the exterior with plain, stiff, hollowed-out leaves, and on the face looking into the church with a cross; and (2) by a single massive pier built about the middle of the length of the wall in

Fig. 167.—Toscanella. San Pietro (VIIIth and XIIth Centuries).

order to strengthen it. These arcades, however, which are now built up and in places destroyed altogether, were filled by *transennae* intended to transmit a modified light to the gallery, and fixed against the smooth strips which separate the two halves of the ellipse of the capitals. The basilica also of St. Demetrius (Vth century) in the same place has the upper part of the nave embellished with an arcade with engaged columns; but these too, before they were walled up, were filled by *transennae* intended to light the nave.

The upper end of the nave opens into a spacious presbytery bounded at the further extremity by the apse (which is flanked by two niches taken out of the thickness of the outer wall), and in front by the piers of the chancel arch which support both the transverse and longitudinal arches of the presbytery, and also the two nearest arches of the nave.

The presbytery of the original church was divided from the nave and aisles

by a screen. Of this screen, and also of the altar and other ritual fittings, numerous marble fragments survive, now built up in the roughly constructed dwarf walls, furnished with seats on the inside, which were intended to form an outer partition for the actual presbytery, and also to separate its middle portion from the sides. These fragments, consisting of entire *plutei*, parts of *plutei*, cornices, and uprights, at first sight appear to be of the same date, but to a trained eye reveal work of two distinct periods.

Fig. 168.—Salonica. Eski-Djama (Vth Century).

To the earlier belong, for example, the altar frontal (Fig. 169) and the fragment of a *pluteus* (Fig. 170) here illustrated. In the carving of this group we find, in the first place, the Pre-Lombardic characteristics of the first half of the VIIIth century; *e.g.* the motive of crosses framed in pairs of arches which, with the pillars from which they spring, are sometimes composed of interlacings; a kind of ornamental cresting of cauliculi arranged symmetrically; and thirdly, the design of squares formed by interlacing bands containing flowers, crosses, bunches of grapes, leaves, conventional plants, birds, &c. But the art displayed is less advanced than that of two fragments of *plutei* built into the wall of the portico of the SS. Apostoli at Rome, which we may believe were set up by order of Pope Hadrian I after the fall of the Lombards (774-795), as is shown by the less barbarous treatment of the leaves and birds pecking (the

feathers being represented by irregular triangular notches made by the hammer) which are carved on them, and also by the presence of conventional lilies, not single

Fig. 169.—Toscanella. San Pietro. Altar frontal (739).

but combined in heads. So that I have no hesitation in assigning this group to the first half of the VIIIth century and to the handiwork of Master Rodpertus or one of his "colleagues."

To a later period, on the other hand, belong the carvings illustrated by Fig. 171,

Fig. 170.—Toscanella. San Pietro. Fragment of *Pluteus* (739).

and all the others of the same type and workmanship to be found in the screens of the church. They exhibit, both in design and execution, a striking improvement on

those of the earlier period. This group shows more regular and accurate design than the marble fragments of the time of Hadrian I, which came to light in the recent restoration of Santa Maria in Cosmedin at Rome (Fig 172).[1] These fragments are to be regarded as representative of the best work in carving ordered by Hadrian I; that eminent restorer and rebuilder having, as we know, decorated the church in such a way that it should deserve its title of "cosmedin." They must also be considered to be the result of Comacine chisels on account of the designs they show, which were at that time a novelty at Rome, and in view of the characteristic sharp edge of the carving, and the typical crudity and rudeness which mark their productions.

Fig. 171.—Toscanella. San Pietro. *Pluteus* (IXth Century).

At Rome, in the VIth, VIIth, and VIIIth centuries, up to the fall of the Lombards, so hated and dreaded by the Popes, the local artists, for the decorative treatment of panels, kept to the motives of the old

Fig. 172.—Rome. Santa Maria in Cosmedin. *Pluteus* (774-795).

[1] Giovenale, *La basilica di Santa Maria in Cosmedin.—Annuario dell' Associazione artistica fra i cultori di architettura in Roma*, anno V.

Roman School of the classical period and of the decadence, supplemented by those of the Schools of Constantinople and Ravenna. So that the panels which may

Fig. 173.—Rome. Santa Sabina. *Pluteus* (795–816).

be regarded as their work merely show the usual characteristic framing, lozenges, eight-pointed stars, flowers, rounds, and crosses; and, later, small sunk panels, roses, whorls, knots, small trees, and geometrical interlacings.

Fig. 174.—Rome. Santa Sabina. *Pluteus* (824–827).

The group in question, moreover, shows an art superior to that of the carving seen in the remains of an altar and chancel screen (Fig. 173) belonging to the time of Pope Leo III (795–816), which a few years ago were degraded to serve as steps up to the high altar in the basilica of Santa Sabina at Rome (Vth century), but are now exhibited in the left aisle. The execution of the bunches of grapes and the form of the leaves do not suffer by comparison with the carvings of the choir enclosure (Fig. 174) of Pope Eugenius II (824–827), now shown with them.

These carvings in Santa Sabina are to be regarded as the work of local chisels, because we find in them, especially in the later ones, a method of cutting which is not so uniformly triangular as that of contemporary Comacine work, and also a certain grace and elegance—a breath, as it were, of classic art, which we should look for in vain among the productions of the Lombard gilds of the IXth century.

Hence we shall not go far wrong if we assign the second group of carvings in San Pietro to the time of Virobono, bishop of Tuscania, whom we have already come across, or rather of his successor John, who filled the episcopal chair for many years with so much honour that Pope John VIII (872–882) sent him as Apostolic Legate to preside at a Council held in 876 in France, where he sat at the right hand of the Emperor Charles the Bald.

Fig. 175.—Tuscanella. San Pietro. Capital (739).

With these fragments go the two cubical capitals (Fig. 175) clumsily inserted below the impost line of the presbytery arches; another small cubical capital which may be noticed at the entrance to the presbytery from the right aisle, where it supports the damaged archivolt of a ciborium; and, thirdly, three small capitals closely allied to the preceding, built into the vestibule of the crypt and the adjacent passage. All these capitals, which must have belonged to the chancel screens and ciborium of the original church, are cubes with the lower angles bevelled off, and the faces ornamented by cauliculi and rude leaves packed into shells or else free. They are carved in low relief without undercutting, and the design is as barbarous as the execution is coarse. The one at the entrance to the presbytery shows a family likeness to the small cubical capital (Fig. 176) made for the iconostasis of Pope Hadrian I in Santa Maria in Cosmedin at Rome (774–795), recently discovered, with the shaft and base belonging to it, in the campanile of that church for which it had been used in the XIIth century. But it is not of the same date as the latter, for the greater crudeness of both design and execution, and the greater poverty of composition which it shows, make it evident that it is the work of a period earlier than Pope Hadrian, in other words that it belongs to the first half of the VIIIth century.

Fig. 176.—Rome. Santa Maria in Cosmedin. Column in the Campanile (VIIth Century).

There is no evidence to show whether, originally, the presbytery was only slightly elevated above the floor of the nave, like that, for instance, of Santa Petronilla near Rome (IVth century), which is raised above the choir merely the depth of the threshold between them, while the choir is raised by only a single step above the floor of the

nave. On the other hand, it may have stood at the top of some kind of a flight of steps, as in the church of San Protaso in the suburbs of Como (391–420), where the floor of the presbytery was raised about 1½ feet above the level of the nave,[1] or the primitive basilica of San Valentino on the Via Flaminia near Rome (337–352), where the *bema*, including the *schola cantorum* or choir, stood somewhat above the floor of the church, and the apse was raised several steps higher than the *bema*.[2] Another instance was the church immediately preceding in date the basilica of Euphrasius at Parenzo, and going back to the IVth century,[3] where the presbytery was raised about 2 feet above the floor of the nave. The fact is that at Toscanella the bases of the piers, columns, and half-columns in the presbytery, were left buried when the floor was raised, as may still be seen.

Beneath the presbytery and apse a crypt or *confessio* was constructed, but above

Fig. 177.—Toscanella. San Pietro (VIIIth and XIIth Centuries).

ground owing to the abrupt fall of the site. That a crypt was built at the same time as the church is confirmed by the existence of three windows, one in the middle of the apse and two in the aisles, intended to light it, for they are evidently contemporary with the building of the church.

The outer walls of the church (Fig. 177), of rubble concrete faced with regular courses of dressed tufa, are embellished with blank arcades and arched corbel courses divided by small lesenas. The latter show the erroneousness of the view of archaeologists[4] who would postpone the introduction of such miniature arcades to the epoch of about the year 1000. In this connection I may remark that, if arched

[1] Barelli, *Chiesa di San Protaso nei sobborghi di Como.—Rivista archeologica della provincia di Como*, fasc. 25.

[2] Marucchi, *Il cimitero e la basilica di San Valentino.*

[3] *N. Bullettino di archeologia Cristiana*, 1895.—Marucchi, *Le recenti scoperte del duomo di Parenzo.*

[4] *Rivista arch. della provincia di Como*, fasc. 10.—Barelli, *Battistero di Lomo.*

corbel courses broken by lesenas are a decorative feature invented at Ravenna, it was the Lombard gilds which gave them refinement, used them more freely, combined them in greater variety, and thereby imparted to wall surfaces an air of grace and elegance which it would be vain to look for in buildings of the Romano-Ravennate style.

The walls are finished by a cornice carried on consoles. The apse (Fig. 178) is embellished by an arched corbel course divided by vertical rolls, by a band of tiles arranged lozenge-wise, and by two courses of rectangular cavities. The latter, three in each division, are a new idea which may have suggested the invention of the arched niches grouped in threes by lesenas, the earliest example of which is

Fig. 178.—Toscanella. San Pietro. Apse (739).

presented by the apse of Sant' Ambrogio at Milan (789-824). The church was lighted (1) by narrow, and sometimes very narrow, round-headed windows splayed both inside and out; (2) by loops splayed inside; (3) by luminous crosses; and (4) by rectangular openings recessed in steps. Of the latter, by the way, a number of examples are to be found in ancient Roman tombs. This kind of opening was in course of time widened, arched at the top, and moulded in the jambs and archivolts; the result being the characteristic Lombardic recessed and moulded window.

The narrow double-splayed windows, the lighting capacity of which steadily diminishes as they get nearer the ground so that at last they become mere loops, those in the presbytery being even narrower than those in the nave, might have been made on purpose to create serious difficulties for archæologists. It is not easy to decide whether our Comacine master, Rodpertus, with the problem before him of providing

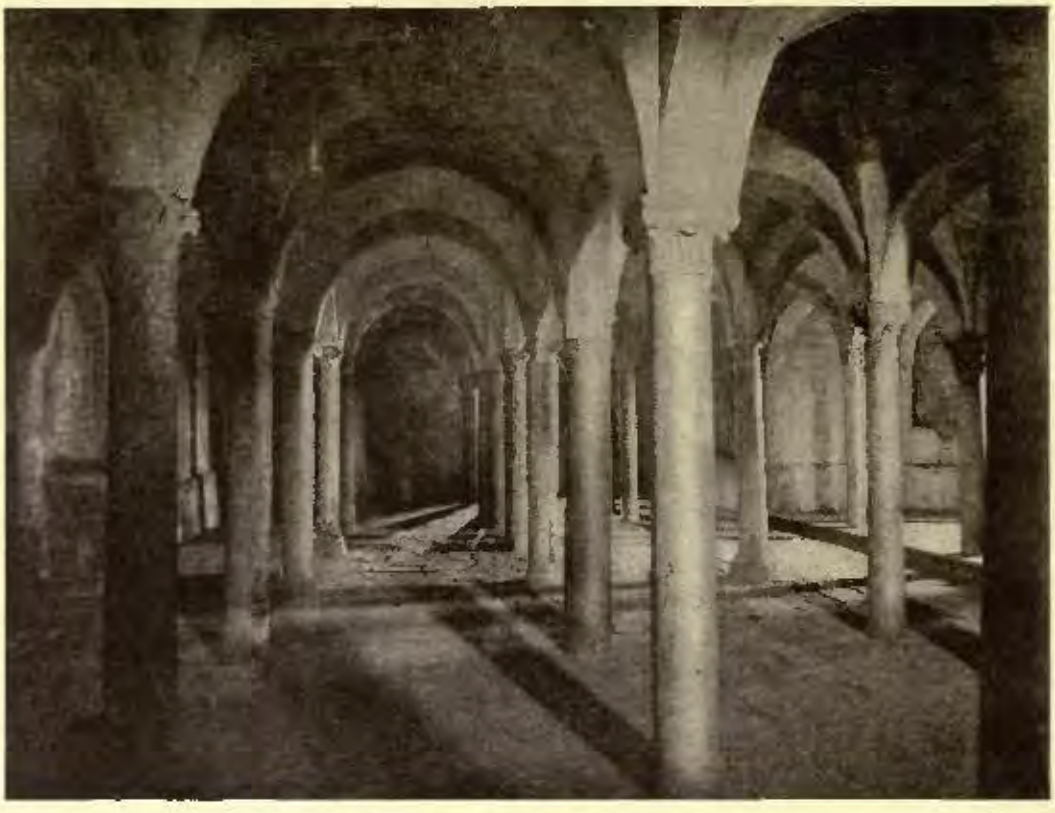


Fig. 179.—Toscanella. San Pietro. Crypt (XIth Century).

light for his church, adopted this arrangement in order to increase the solidity of the building; or to make it difficult for ill-intentioned persons to penetrate into the sacred precincts unobserved; or with the idea of creating, especially in the sanctuary,

Fig. 180.—Toscanella. San Pietro. Capital in the nave (XIIth Century).

Fig. 181.—Toscanella. San Pietro. Capital in the nave (XIIth Century).

an atmosphere of reserve and mystery by leaving it rather dark; or because windows of this form seemed to him best suited for a building so exposed to the fury of the winds, especially from the north; or, in conclusion, for all these reasons taken together.

The original doors had lunettes above them.

The date of the church is shown by the carving of the marble fragments and the cubical Corinthianesque capitals already noticed. Additional evidence is provided by the plain cubical capitals surmounting the half-columns of the presbytery and the first arches of the nave, and, again, by the plain cubical capitals used in the blank arcading. The latter are merely a rudimentary form of the other worked capitals. Besides, that the building is earlier than the IXth century is shown by the introduction of the small rectangular cavities in the apse, the forerunners of the arched niches which appear about the dawn of that century. And the apse also shows that it is later than the VIIth century. Before that time, the apses of churches in Italy, with the single exception of San Giovanni Evangelista at Ravenna (425), exhibited perfectly bare outer faces, or else were merely finished at the top with the classical Roman motive of a range of consoles, or, under the decadence of art, with a band of saw-tooth, the two motives being sometimes combined.

Fig. 182.—Viterbo. San Sisto Vecchio (XIIth Century).

And that it was built by the agency of a Comacine gild, and not by workmen either local or from the neighbouring Duchy of Rome, is not difficult to prove. First and foremost, the constructive and artistic quality of the building is plain evidence of the fact. And then we must remember that, down to the fall of the Lombard kingdom,

the Code of Rotharis and the "Memoratorio" of Liutprand continued in force, and the Comacine masters still enjoyed the privileges granted to them by those monarchs. Moreover, we may take note that the statutes of Tuscania, which are believed to date from the first half of the XIIIth century,[1] that is to say a period when the prosperous Ghibelline town had not yet been compelled by force of circumstances to forgo the right of self-government,[2] do not say that among the twenty crafts into which the city was divided, was included one of masons, a fact from which it may reasonably be inferred that for important constructions the people of Tuscania were obliged to rely at all times, and how much more in the early Middle Ages, on the

Fig. 183.—Viterbo. San Giovanni in Zoccoli (1037).

building gilds of other districts. And, finally, we may reflect that the Roman master masons and "marmorarii" never built in the Pre-Lombardic style, and that the existing specimens of their handiwork, from the VIIth to the XIth century, are there to prove the absolute impossibility that San Pietro at Toscanella could have been produced by them.

In the course of the XIth century the interior received its present form. The crypt was rebuilt (Fig. 179), the approach to it remodelled, the presbytery raised. These were the changes, I believe, recorded in the inscription on the ciborium of the high altar bearing the date 1093; and this is confirmed by, among other things, the capitals of simple Roman Composite form, specially made for the church and all of the same date, to be seen in the crypt, the ante-crypt, and the ciborium just mentioned;

[1] Campanari, *op. cit.*

[2] Bussi, *Istoria della città di Viterbo.*

by the small Pre-Lombardic cubical capitals, brought from elsewhere, in the original church; by the character of the cross vaulting in the crypt; and by the buried bases of the pillars in the presbytery.

Towards the middle of the XIIth century the church was enlarged by adding two bays to the nave and aisles, and various minor works were also carried out. The date is made clear both by the capitals in the side doors of the front, and also by those in the new part of the building (Figs. 180, 181), no longer simple Composite, but Lombardic of definite XIIth century character, one of them exhibiting the Corinthianesque style of those in the original crypt of San Pietro in Ciel d'Oro at Pavia, which was re-consecrated in 1132.[1] [2] This capital at Toscanella recalls the style of various specimens in San Sisto Vecchio at Viterbo (Fig. 182), which is not so early as is generally thought. The earliest of the churches there is San Giovanni in Zoccoli (Fig. 183), finished in 1037, as is proved by a document in its archives, which shows that a bell re-cast in 1697 bore that date,[3] and confirmed by its capitals, some of which are clearly contemporary with those in the gallery of San Flaviano at Montefiascone. San Sisto Vecchio must have been built in the first half of the XIIth century, very probably in the pontificate of Eugenius III (1145–1150) who resided at Viterbo for considerable periods.

Fig. 184.—Lugnano in Teverina. Church of the Crocifisso (XIIth Century).

Finally, at the close of the XIIth century, the front was remodelled. Its central door is evidently the production of Roman "marmorarii" at the end of that century or the beginning of the next. The capitals of the open loggia above it are clearly of the same date as those in a similar position in the church of Santa Maria Maggiore, also at Toscanella (1206), and those of the portico of San Lorenzo fuori le mura at Rome (1216–1227). Thirdly, the rose window, which, with the pair of two-light windows flanking it, recalls the front of the SS. Crocifisso at Lugnano in Teverina (Fig. 184), belonging, as I believe, to the XIIth century, cannot be any earlier, because rose windows did not make their appearance in church fronts before about

[1] Dell' Acqua, *Per la solenne riapertura al culto della basilica di San Pietro in Ciel d'Oro.*
[2] Malocchi e Casacca, *Codex diplomaticus ord. S. Augustini Papiae.*
[3] Bussi, *op. cit.*

the middle of that century. A very early, certainly dated example is the one in Santa Maria del Vescovado at Assisi, of the year 1163.

THE BASILICA OF SAN SALVATORE AT BRESCIA was, together with the monastery, erected from the foundations by order of King Desiderius (756–774) and his wife Ansa, in place of an earlier church dedicated to St. Michael the Archangel and St. Peter the Apostle, as we learn from two documents of 759 and 760: "monasterii cum ecclesiis, et reliquis edificiis a nobis ibidem constructum"—"monasterio . . . quod nos . . . fundavimus et ereximus et superna subveniente misericordia hedificavimus."[1] The church was begun in 753, the date given by an ancient service book belonging to the monastery.

Fig. 185.—Brescia. San Salvatore (753).

As the present condition of the building (Fig. 185 and Frontispiece) prevents a complete examination of its constructive and artistic features, we will confine ourselves to the following statements.

The original front was destroyed when the upper church of Santa Giulia was built.

The church has lost its apse, nothing being left of it except the foundation wall in the crypt below the presbytery.

The Byzantine cubical funnel-shaped capitals of the nave arcades, covered with pierced and undercut foliage, point to the VIth century and the work of Greek carvers. In all probability they came from the earlier church of SS. Michael and Peter.

On the other hand, the Corinthian capitals with Byzantine sharply indented foliage, and others of the same class but with stiff, plain leaves, which suggest, though in somewhat degraded form, the Ravennate features of the capitals in the Santo Spirito at Ravenna, point to the same date as that of the capitals in the original San Giovanni in Fonte (Fig. 186) and Santa Maria Matricolare at Verona (about 750–760),[2] and must be ascribed to Ravennate chisels of the VIIIth century, and not to Comacine or Byzantine carvers. For in the VIIIth century the Comacine gilds produced only Pre-Lombardic cubical capitals, as is proved by one (Fig. 187) preserved in the Museo Civico at Brescia, coming from the original crypt of San Filastrio in the ancient church of the Virgin there—a church the erection of which is ascribed to the second half of the VIIIth century. Nor have I been able to discover in the East any trace of capitals similar in design or execution to those of Corinthian type with plain, stiff leaves in San Salvatore.

The upper part of the VIIIth century nave was altered at a later date, and covered with the present barrel vault.

[1] *Hist. patriae mon.—Codex diplomaticus Langobardiae.*

[2] Biancolini, *op. cit.*

All that remains of the walls of the aisles, which may be regarded as belonging to the original building, is either coated with plaster or concealed by structures erected against it, so that it is impossible to ascertain whether or not there is any architectural decoration on the outer face.

The windows, now blocked up, in these walls, suggest by their form a date near to those in the parish church of Arliano (712–744) and in San Pietro at Toscanella (739).

The cross vaulting in the aisles is later than the original building, as is shown by the way in which it is constructed.

The basilica of the time of Desiderius had a crypt only beneath the apse, divided into three aisles by four piers supporting longitudinal arches on which the pavement of the apse rested. Later, probably in the XIIth century, the crypt was enlarged by an extension beneath the presbytery.

Fig. 186.—Verona. San Giovanni in Fonte. Capital (about 750–760).

With so few buildings to judge by, it becomes difficult to form a precise idea of the architecture in vogue during the Lombard period; all the more as the surviving specimens are not only few and far between, but are also more or less poor in character. They certainly did not rank, not even San Pietro at Toscanella, the best of them, among the important buildings of the period, for Paulus Diaconus has not mentioned any one of them.

At the same time, I believe that the Lombard architecture was not that uncouth, debased, and barbarous product that it is generally held to have been; and I think that Muratori[1] was right when he wrote that some of the better buildings erected under the Lombard Monarchy, if they had survived the assaults of time, would have presented no uncomely spectacle, seeing that they excited the admiration of Paulus Diaconus, who, we must not forget, had been able to contemplate the numerous important structures of antiquity which in his day were still in existence at Rome.

Fig. 187.—Brescia. Museo Civico. Capital from the crypt of San Filastrio (VIIIth Century).

In fact, so far as we can judge from San Pietro at Toscanella, the buildings of this period exhibit merits of construction of no ordinary character, while the architectural decoration of their exteriors is superior, in variety of motives and their intelligent distribution, to that of any Christian monument erected in Italy before the IXth century. Not to mention that some of the churches must have been sumptuously decorated with mural paintings, among which may be classed the much extolled embellishments which Queen Rodelinda, wife of Pertarit (†686), caused to be executed in the basilica of the Mother of God erected by her outside the walls of Pavia: "opere mirabili condidit, ornamentisque mirificis decoravit."[2]

[1] *Antiquitates Italicæ medii ævi.—Dissertatio XXIV.*

[2] *Mon. Germ. Hist.—Pauli historia Langobardorum.*

Having said so much by way of preface, let us turn to the characteristics of an original nature which differentiate the Pre-Lombardic style in this period, or rather in its last hundred years, being obliged as we are to derive them from monuments which, in almost every case, belong to the VIIIth century.

I. The use of half-columns in piers or walls, with capitals formed of a cube of stone simply chamfered off at the angles.

II. The employment for the small columns and piers of the ritual fittings, such as chancel screens, choir enclosures, and altar ciboriums, of capitals generally shaped out of a prism of marble or some kind of stone, forming one piece with the shaft and base. I call them "Pre-Lombardic cubical" (Figs. 188, 189) to distinguish them from the Byzantine funnel-shaped cubical capitals. Rather free and debased Corinthian in type, they form cubes chamfered in the lower part of the angles which are filled with leaves, sometimes of the stiff, plain type, but more often of the palm. Each of the faces is ornamented with coarse cauliculi, either singly or in pairs; rude and stiff leaves, sometimes plain, at others carved, or, again, with the tips turning over in clusters, in some cases free, in others packed into shells; roses, single and double; whorls; volutes, crosses, conventional trees decorated with flutings; channelling, sometimes arranged in groups; flutings horizontal, vertical, zigzag, and radiating, &c. No attempt is made to reproduce animal figures, and hardly any to represent human beings. With the exception of a well-known cubical capital in the Museo Archeologico at Verona, which shows a human head framed in a medallion, and a similar capital of the VIIIth century just discovered in the crypt of San Giovanni at Asti, with on its face a nimbed head enclosed in a medallion, I do not know what other example to refer to. The decorative details, too, are clumsy and inaccurate, and sometimes merely engraved, though as a rule they are carved in low relief without undercutting, made by sharp, rough indentations, and the lights and shadows produced simply by furrows and notches.

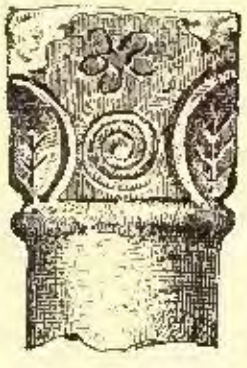


Fig. 188.—Cividale. Capital in the Museum (VIIIth Century).

Fig. 189.—Cividale. Capital in the Museum (VIIIth Century).

Notable specimens of the capitals in question are those of the well-known ciborium in the church at San Giorgio in the Valpolicella, erected under Liutprand (712–744), and Dominicus, bishop of Verona (712–740). They are carved in tufa, an easy material to work, and executed entirely with the triangular cutting made by the chisel. The inscriptions on two of the columns make them a reliable document of the age of Liutprand, so that they can be used as fixed points for comparison (Fig. 190).

This ciborium recalls a canopy formerly in the little church of San Prospero outside the Porta Eburnea at Perugia, now preserved in the University Church. It appears to me to be a work of the latter part of the VIIIth century, on account of the capitals which recall the Ravennate manner of two of the same style, belonging to the time of King Desiderius (756–774), in San Vincenzo in Prato at Milan.

In the VIIth century, in the districts under Lombard rule, taste in architectural forms remained at a higher level than skill in design which, at least for carving, had sunk to the lowest depths. The technique, too, of the art of carving was in no better plight, being reduced to a positively elementary state, especially in the case of capitals, as is shown by those in the crypt of Sant' Eusebio at Pavia. The Comacine masters had ceased to produce capitals at all, as it had become more convenient for them, and less costly for pious founders, to use up old ones collected from various sources. But when they found that, in addition to the decay of their own art and their want of skill, they were faced by the fact that such capitals became more difficult to procure as time went on, especially those of small dimensions suited for ritual furniture, they were obliged to supplement them with the productions of their own chisels. Accordingly they confined themselves to simple cubes chamfered at the corners in various rude ways, the only attempt to relieve their coarseness being some barbarous ornament engraved or carved upon them.

Fig. 190.—San Giorgio in Valpolicella. Church. Capitals of Ciborium (712–740).

The introduction of capitals of this sort must be referred to the second half of the VIIth century. In the first half they were not yet in use, as those in the crypt of Sant' Eusebio at Pavia prove; whereas in the early years of the VIIIth century they are found, in a not very rudimentary form, in the ciborium of the church at San Giorgio in the Valpolicella. At first they bear all the marks of that crudity which characterises an art which has reached its lowest level. Later, however, during the long and prosperous reign of Liutprand, they steadily improved both in design and execution. The Comacine masters carried them all over Italy, whence they spread along the eastern coast of the Adriatic and beyond the Alps.

Fig. 191.—Classis. Sant' Apollinare. Ciborium of St. Eleucadius (IXth Century).

This new type of capital was the invention of the Comacine masters. In Italy the craftsmen of Ravenna did not employ them, and the very few specimens to be found in Ravenna

and it sterritory are obviously the work of Lombard chisels in the VIIIth or IXth century. The capitals of the ciborium of Saint Eleucadius (IXth century) in Sant' Apollinare in Classe (Fig. 191), with their Pre-Lombardic ornamentation, though of Byzantine cubical form, show us what the cubical type preferred by the artists of Ravenna in the IXth century was really like.

The Byzantines did not adopt this type of capital till late. Among them the oldest certainly dated examples (or presumably such), with the lower part of the corners slightly chamfered off, and mostly ornamented with crosses, flowers, leaves, &c., carved in low relief on their faces, are to be found in the churches of St. Nicodemus (about 1044), St. Theodore (1049), and Kapnikaraea (XIth century) at Athens; also on the Acropolis there (Figs. 192, 193), in a heap of fragments near the Parthenon, mixed up with sculpture of every kind and date; and, again, in the church of the monastery of Daphni (XIth century) near Eleusis (Fig. 194). We also meet with

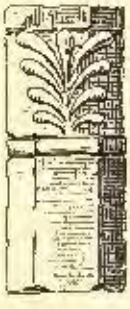


Fig. 193.—Athens. Acropolis. Capital (XIth Century).

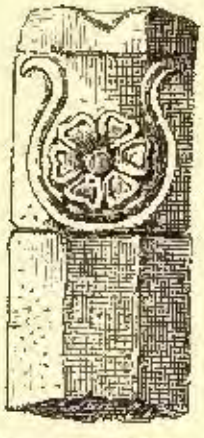


Fig. 192.—Athens. Acropolis. Capital (XIth Century).

Fig. 194.—Daphni. Church. Capital (XIth Century).

them, in the form of cubes chamfered the whole way up the angles, in St. Saviour Pantepoptes at Constantinople (1081–1118). Lastly, we find them in St. Panteleemon at Salonica (XIth or XIIth century), which, in spite of its affinity with the Holy Apostles, St. Elias, and the church of the Virgin (though it is more advanced than this), is differentiated from them by its decorative niches on the exterior, and must be placed at a later date, *i.e.* at the end of the XIth or beginning of the XIIth century.

This type of capital was the only one in use during the VIIIth century in the Kingdom of Lombardy, and, after its fall, in its former territory and in the Duchy of Rome. The only exceptions are a few productions of Ravennate carvers, such as those of the VIIIth century in the baptistery of Callistus and Santa Maria in Valle at Cividale; in the old church of Santa Maria Matricolare (about 750–760), and the original San Giovanni in Fonte (about 750–760) at Verona; and in San Salvatore at Brescia (753). Cattaneo,[1] indeed, included among those of the VIIIth and early IXth centuries in use in the aforesaid territories, certain Corinthian and Composite capitals, in some cases accurate in execution, and of varied form. For instance, he reckoned among them the Roman Composite capitals with plain stiff leaves, and the volutes and ovolo left uncarved, in the crypt of Santa Maria in Cosmedin

[1] *Op. cit.*

at Rome (Fig. 195); and also those of Corinthian type in the church of Santa Maria in Domnica, also at Rome, built by Pope Paschal I (817–824). He adduced them as the earliest efforts of the new birth of Italian art, but in this view I believe he was mistaken. So far as capitals are concerned, the classical revival of the XIth century was almost contemporary with the appearance of the Lombardic style; and it started in Lombardy, in the most vital centre of the old Lombard realm, where the embers of art glowed brightest at that time in Italy, and thence spread over the whole peninsula. These capitals, then, wrongly ascribed by Cattaneo to the VIIIth or IXth centuries, must be assigned to the XIth, or even the XIIth and XIIIth. The imitation of classical Roman work was a task beyond the powers of the Lombard carvers with their very scanty skill, and still more those of Rome in the VIIIth century, and they certainly had not the enterprise to attempt it; while the carvers of Ravenna never produced in that period capitals of the kind found in the two churches which we have referred to.

Fig. 195.—Rome. Santa Maria in Cosmedin. Capital in the crypt (XIth Century).

For these reasons I regard as work of the end of the XIth century or the beginning of the XIIth the capitals in the basilica of Santa Maria in Domnica, referred by Cattaneo to the pontificate of Paschal I, who rebuilt the church from its foundations.[1] I believe that they are a result of the restoration which the building must have needed after the damage surely suffered by it, like the others on the Celian, at the hands of Guiscard when he entered Rome in 1084.[2] I should also assign

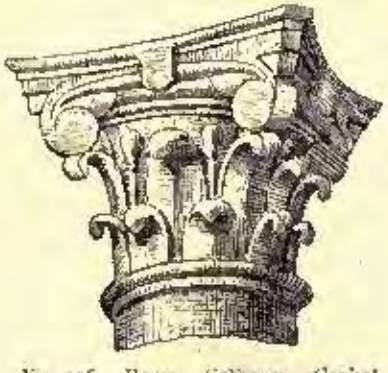


Fig. 196.—Rome. Coliseum. Capital (69–80).

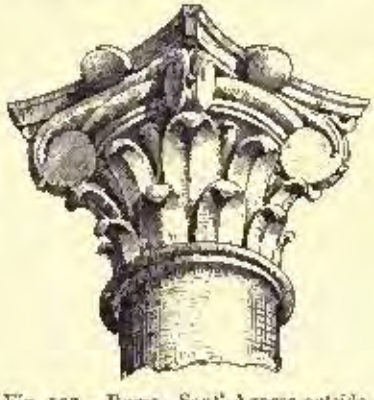


Fig. 197.—Rome. Sant' Agnese outside the walls. Capital (1st Century).

to the early XIth century and to Italian hands (for no such architectural forms are to be found in the East) the Composite capitals in the crypt of Santa Maria in Cosmedin. These latter are more or less simple modifications of the initial form of the Composite which, as I have pointed out,[3] appeared in Rome under the first two Flavian Emperors (69–81). The archetypes are to be seen in the Flavian

[1] Duchesne, *Le liber pontificalis.* [2] *Mon. Germ. Hist.—Annales Cavenenses.*

[3] Rivoira, *Della reattura ornamentale dai tempi di Roma imperiale al Mille.—Nuova Antologia*, anno 1904, fasc. 790.

Amphitheatre at Rome, opened in the year 80 (Fig. 196); and some very fine ones in the nave of Sant' Agnese outside the walls, probably belong to the 1st century (Fig. 197).

Fig. 198.—Rome. Lateran Museum. Capital (795-816).

A similar form of the classical Composite was for a considerable period in favour at Rome. Thus, in the days of Pope Symmachus (498-514), we find a carver of that school converting a block of marble with the epitaph of Celer, the architect of Nero, into the well-known and damaged capital set near the entrance to the stairs leading down to the basilica of Sant' Agnese outside the walls. Two of the same pattern, and well preserved, have been used in the narthex of the basilica. All three have a special stamp distinguishing them from those of the same kind belonging to an earlier period. They have no longer the old graceful form consisting of a double circle of leaves, marked by a rib down the middle and more or less undercut, with shoots springing up between them, and plain discs taking the place of volutes, also sometimes undercut, while the flower on the abacus is represented by a mere boss. On the contrary, these are squat, and formed merely by two rows of leaves stuck on to the body of the capital without any indication of a central rib, while the volutes are irregular discs squeezed up and forming one mass with the capital; and the abacus is ornamented with a rude ovolo.

Fig. 199.—Villanova. *Pluteus* in San Pietro (VIIIth Century).

The decadence in composition, design, and execution, which we find in the capitals of the narthex at Sant' Agnese, became so marked in course of time that the Roman carvers of the end of the VIIIth century and the beginning of the IXth could produce no better specimens than the two very barbarous ones placed against the north wall of the old cloister of San Cosimato at Rome, two more of rather better style, belonging to the time of Pope Leo III (795-816),

preserved in the Lateran Museum (Fig. 198), and some of the same date as the last in the Forum. It was only in the first half of the XIth century that the debased type of the IXth century Composite capitals appeared at Rome in an improved form. Interesting examples of this new type are provided by the crypt of Santa Maria in Cosmedin.

Even though we take no account of the fact that it is not proved that this church, as built by Hadrian I, was provided with a crypt or *confessio*, and paying no attention to the common belief that the present crypt was constructed at the time of the restorations and embellishments ascribed to the XIth century,[1] we know what sort of capitals were specially made for Hadrian's church. One of them has survived, a solitary specimen which we have to thank the Roman "marmorarii" of the XIIth century for using in the campanile, instead of destroying it, as they seem to have done with all the rest that belonged to the old chancel screen. And as it is impossible to believe that such an unskilled chisel was employed to carve the capitals of an important piece of ritual furniture, while a far superior one was reserved to produce those in the crypt, therefore it is not unreasonable to assign the latter to a period later than the end of the VIIIth century, or, to be more precise, to the first half of the XIth.

Fig. 200.—Sirmione (Lake of Garda). *Plutei* built into the Casa Comunale (VIIIth Century).

III. The use in the interior of buildings of blank arcading.

IV. Lastly, in the carved panels (Figs. 199, 200), uprights, and architraves of chancel and choir screens, altar fronts, ambons, and archivolts of ciboriums, the introduction of interlacing bands, generally with a double groove; palm and vine leaves; a very free use of lilies, roses, bunches of grapes, Latin or Greek crosses with the outer angles often ending in curls; pairs of SS facing one another; decorative arcadings; semicircular arches interlacing so as to produce pointed arches; bosses, bead and reel ornament, wheels, and stars; birds pecking at fruit, leaves, or flowers, or drinking from a vase; fishes, cocks, serpents, lions, stags, bulls, griffons and chimaeras; and, lastly, though rarely, human figures and the symbols of the Evangelists.

[1] Giovenale, *Annuario &c.*

These carvings are in low relief, all on one plane but of irregular depth, entirely worked without undercutting, and the fillets, bands, crosses, leaves, flowers, arcades,

Fig. 201.—Civita Castellana. Portico of the Duomo. Front of sarcophagus (VIIIth Century).

animal forms, &c., are produced by sharp, rough indentations. In these ornaments, in spite of the incorrectness of the drawing and the rudeness of the execution, a certain charm is sometimes to be found. This incorrectness is far more marked in the animal figures, where the form is often so little realised that it is impossible to say to what species they belong. This is even more the case in human figures, which are characterised by an absolute lack of expression in the faces, by an infantile monotony in the composition, by the absence of any rules of proportion, by excessive stiffness in attitudes and drapery, and lastly, by an elementary treatment of the extremities which indicates the lowest stage of art. This can be verified by any one who gives even a passing glance at Fig. 201, which reproduces part of a sarcophagus, now built into the left wall of the portico of the cathedral at Civita Castellana (XIIIth century). Here the trunks and branches of the trees, two of which are placed so as to form a kind of arcade, are represented by grooved bands recalling, both in execution and design, the interlacings on slabs of the time of Liutprand which we noticed in San Pietro at Toscanella (739). This similarity in style suggests that we may ascribe the carving on this sarcophagus front to the same period, and to

Fig. 202.—San Giorgio in Valpolicella. Church. Archivolt of ciborium (712 746).

a Comacine chisel working to the order of the Lombard duke named in the inscription cut along the top of the slab.

I am well aware that many people will find it hard to believe that the last Pre-Lombardic characteristic is original. Some writers regard it as the result of a mere imitation of Byzantine work, or else an indirect copy of such work influenced, however, by Northern elements; while others look on it as a result of the grafting of Northern or barbarian and Byzantine elements on the stock of Roman art in the period of its decline. Others, again, consider it to be the work of Eastern artists, or of Italians trained in the Eastern School; while, lastly, another class believes that it was derived, by means of a transformation, from Roman and Early Christian art.

Fig. 203.—San Giorgio in Valpolicella. Church. Archivolt of ciborium (712–740).

We may allow that some of the elements just mentioned contributed to the formation of Pre-Lombardic decorative carving, and I mean thereby Roman art both Pagan and Christian, and also Byzantine, the Northern or barbarian elements being a myth,[1] while the Byzantine sculptors of the VIIIth century, whether they were refugees from the iconoclastic persecutions or not, were, if I am right, merely Italian artists. But it is none the less true that this carving does constitute a new style, the invention of which must be credited to the Comacine gilds, drawing their inspiration from Etruscan, Roman, and Ravennate art.

These gilds diffused it throughout Italy and along the eastern coast of the Adriatic, and thence it spread beyond the Alps, acquiring, as time went on, in the different countries, a special character derived from the traditions of the School, local influence, &c. Concrete instances of this can be pointed out in many localities, especially at Rome, where the Pre-Lombardic carved panels, which had only just made their appearance in the days of Hadrian I and after the Lombard Kingdom had come to an end (774–795), had already acquired a character of their own, both in composition and execution, by the time of Eugenius II (824–827).

In fact, though we may find in previous works the prototypes of the decorative elements which appear in carvings of this kind—the grooved bands, interlaced, knotted, and twisted in various ways; the compartments of different shapes enclosing fanciful objects of all sorts: stars, crosses, lilies, bunches of grapes, leaves, sun-flowers, daisies, roses, whorls, bosses, birds, &c.; arcades; intersecting arches; caulículi and the bead and reel; doves generally pecking at something; peacocks drinking at a vase or fountain, with sometimes a serpent biting the crest on their heads; fishes, animals, birds, griffons, &c., following, facing, attacking, and biting one another—these elements are very often combined in such a way as to form absolutely new motives and compositions which, though not very refined, are still original, rich, varied (sometimes even restless to the eye), and actually pleasing.

That the Comacine masters were the authors of this carving is proved by the

[1] *Archivio storico lombardo*, 1896.—Fontana, *Sull' origine dell' arte longobarda.*

fact that the earliest specimens made their appearance at the beginning of the VIIIth century, in the districts subject to the Lombards, in company with the characteristic Pre-Lombardic cubical capitals.

That it was not a creation of the East, imported into Italy by the Greeks, can easily be proved. The four mutilated archivolts (Figs. 202, 203) of the ciborium in the church at San Giorgio in the Valpolicella (about 712–740) present the oldest certainly dated example of this kind of ritual furniture ornamented with interlacing basket work and animal forms, and edged, though only partially, with a cornice of cauliculi; features which form three of the chief elements in Pre-Lombardic carving of the VIIIth century. The whole is treated in low relief, the cutting being of very acute triangular section, left as the chisel produced it on all the parts which stand out from the background.

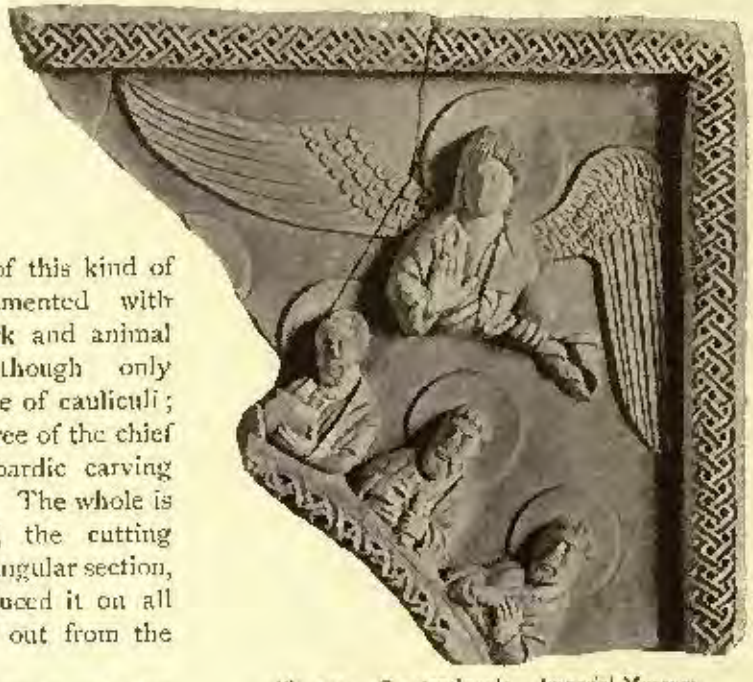


Fig. 204.—Constantinople. Imperial Museum. Archivolt of ciborium (VIth Century).

Before the appearance of this ciborium (a fixed point of reference for the character of Pre-Lombardic decorative carving in the early part of the VIIIth century) there was no specimen of this kind of ritual furniture in the East presenting such a wealth of interlacing as the one at San Giorgio, or decorated with figures, even symbolical ones, of animals, or finished with a cornice of cauliculi. The Comacine masters applied the last motive to gabled archivolts, and finally substituted for it the design of leaves following the slope of the gable, a notable instance of which is the canopy of the ciborium in Sant' Ambrogio at Milan, belonging to the XIIIth century.[1]

Fig. 205.—Rome. Santa Maria Antica. Archivolt of ciborium (705–707).

Before Leo III the Isaurian (717–740) issued the first decree (726) against the worship and production of images, and before the substitution of figures of animals for those of saints during the reign of Constantine V Copronymus (740–775), the

[1] Biscaro, *Archivio storico lombardo*, 1904, 1905.—*Note e documenti Sant'ambrosiani.*

Byzantines were fond of decorating the archivolts of ciboriums with figures of Christ, the Apostles, and angels, framed by foliage, interlacing, bands of indentations, bead and reel ornament, &c. (Fig. 204); or else with foliage alone; or, thirdly, with

Fig. 206.—Athens. Church of the Virgin Gorgoepekoos. Slab in the façade.

leaves, scroll work, flowers, and whorls, as may be seen in the archivolt found not long ago in Santa Maria Antica in the Forum at Rome (Fig. 205), a church which has been well described by Mr. Rushforth.[1] This archivolt must be assigned to the

[1] *Papers of the British School at Rome*, Vol. I.—*The Church of S. Maria Antiqua.*

time of Pope John VII (705–707) and to a Greek chisel, for we know that the Pope, who was a Greek by origin, embellished the church with mural paintings, and erected an ambon. Hence it is more than probable that he also provided it with a ciborium, and entrusted its execution to some carver of the Greek School, an origin which is indicated by both the composition and the technique of the archivolt. On the

Fig. 207.—Athens. Church of the Virgin Gorgoepekoos. Slab in the façade.

one hand, it does not show the facility and variety of grouping which characterize the productions of the Pre-Lombardic School in the VIIIth century; and, on the other, it presents a design which is less faulty, and cutting not so irregular, though at the same time not so deep, and therefore poorer in light and shade, than that to be found in the works of the contemporary Italian School.

Then, if we pass from the archivolts of ciboriums to carved slabs or panels, we find that, if we do not notice in the Eastern examples so marked a want of balance

between the hand with its lack of skill and the imagination with its wealth of fancy, as strikes us in those of the Pre-Lombardic School; neither do we come across that rich variety of motives, and those interlacings, with their bands crossing and recrossing in circles and knots of ingenious and wonderful complexity, two features which are characteristic of that School and exhibit a power of fancy which we should look for in vain in the works of the Byzantine School. And we also find that in the East, I mean of course in religious sculpture, animal representations are preponderantly derived from Early Christian symbolism, or else reproduce motives from Graeco-Roman art, and are hardly ever original. When they are, the animals, whether real or imaginary, are not grouped in such a fanciful way, or engaged in such strange conflicts, as occur in the animal subjects of Pre-Lombardic carving which later became the most striking feature of decorative sculpture in the Lombardic style.

We have to reckon, however, with the five slabs at Athens, covered in low relief with figures of griffons pecking at pine-cones, birds fighting with dog-headed snakes, lions biting themselves in the back, winged sphinxes flanking a conventional tree, with wingless sphinxes in one case appearing above them, and, lastly, a lion in the act of tearing in pieces a lamb, used as building material in the front (Figs. 206, 207) and back of the church of the Virgin Gorgoepekoos (XIth or XIIth century), wrongly called the old cathedral. It is on the strength of these that Cattaneo[1] and others with him assert that in the VIIIth century figures of this kind were common in the churches of the East and absolute novelties in the West. But this statement is very far from the truth, for it seems that the five slabs in question came, like another preserved in the National Museum with two lions flanking a conventional tree, from a Graeco-Egyptian temple close by, possibly dedicated to Serapis. Very different were the sculptured panels in Greek churches, not only in the VIIIth, but in the centuries before and after, right down to the XIIth. And without hunting over the whole of Greece for specimens—and there are plenty of them: I confine myself to reproducing here the fragment of a *pluteus* (Fig. 208) lying near the threshold of the door leading to the graveyard of the round church of St. George at Salonica (Vth century)—the same church of the Virgin Gorgoepekoos tells us what they were like.

Fig. 208.—Salonica. Church of St. George. Fragment of *pluteus* (IXth or Xth Century).

The fact is that the sculptures collected from various sources, which form so large a part of the outer facing of that very interesting church (Fig. 209), include, together with specimens of Pagan times, a large number which belong to the Christian ages, apparently from the IVth to the XIIth century. Now, among the latter we observe lozenges, either alone or connected by knots, lilies, roses, palmetto leaves, crosses of

[1] *Op. cit.*

various forms with the foot often ending in foliage, interlacings, bead and reel ornament, intersecting arcades, a small arcade with pairs of columns tied together with a cable, and crosses flanked by lions or griffons. All are carved in low relief of varying depth, which sometimes is rounded off, while in other cases it is treated in cuts of triangular section left as the chisel produced them, not, however, so sharply defined as in works of the Pre-Lombardic style. But we never find the strange and fantastic animal representations which characterize the productions of that School.

Fig. 209.—Athens. Church of the Virgin Gorgoepekoos (XIth or XIIth Century).

CHAPTER IV

ARCHITECTURE IN ITALY AND DALMATIA IN THE TIME OF CHARLES THE GREAT

FROM Ciampini[1] to d'Agincourt,[2] from d'Agincourt to Cordero,[3] and right up to our own time, writers have always been lavish in their praise of Charles the Great (768–814) for having, as if by a touch of the enchanter's wand, raised up art which had utterly fallen from its high station. And this is supposed to be specially true of architecture, for the improvement of which he took peculiar care, guided therein by his personal taste. And as if this were not enough, some of them have further suggested that the buildings erected by the Emperor's orders were designed by that master mind to serve as a universal standard in architecture; and that it was only through the incapacity of his degenerate successors that this vast conception was never carried out. In any case, the buildings in question had a considerable influence on the architecture which preceded the Pointed style.

I am, however, afraid that, hitherto in the history of art there has been some exaggeration not only of the artistic capacities of the Emperor himself, but also of the influence exercised, especially in Italy, by the buildings erected in his time. The truth is that Charles had far more at heart the diffusion of civilisation in the vast Empire which he founded than the promotion of the fine arts. At the right time we shall discuss the buildings actually erected in his dominions to the north of the Alps by his order and with the aid of Imperial funds, or shortly after his death and under his influence; and it will be seen that they are not of such a character as to make my suspicions groundless.

In the territories taken from the Lombards he confined himself to the restoration of an ecclesiastical or civil building here or there. The structures which De Dartein and other writers believe to have been erected in the Emperor's lifetime under the immediate influence of the Palatine Chapel at Aachen (796–804), viz. the "Rotonda" at Brescia and Santa Sofia at Padua, were really buildings erected after the Xth century.

The old, so-called "winter" cathedral dedicated to the Mother of God, at Brescia, which must have been built in the second half of the VIIIth century, a date confirmed by the capital brought from its original crypt (San Filastrio), and now in the Museo Civico of the town, was an edifice of basilican form, the plan of which was brought to light in the course of the recent restoration, and has been traced out on the floor of the present Rotonda. It consisted of a nave without aisles, the outer walls being

[1] *Op. cit.*

[2] *Storia dell' arte dimostrata coi monumenti dalla sua decadenza nel IV° secolo fino al suo rinnovamento nel XVI.*

[3] *Op. cit.*

only about 2 ft. 4 in. thick, and consequently strengthened on the outside by buttresses corresponding to the tie beams of the roof. However, it was evidently rebuilt; for during the restoration of 1883 there was discovered a marble slab with the date 897, which had been used in the construction of one of the vaulting piers. It has been suggested[1] that this happened about the year 1000. But the freedom of the groined vaulting, and the capitals wrought expressly to carry it, indicate a date not earlier than the XIth century. It is my belief that the XIth century or the first half of the XIIth is the period which best suits the Rotonda of Brescia.

Santa Sofia at Padua, again, was never a round building, and it is certainly not so old as the Carolingian period. The well-known Charter (1123) of Bishop Sinibaldus (1106–1124) does not refer to a complete rebuilding of the church, but rather, as Cattaneo[2] suspected, to the completion of the grand external apse forming an ambulatory to the internal apse. The Lombardic figures of animals on the lower story of the exterior of the apse point to the XIth century.

* * *

When the Lombard king, Aistulf, had, by the capture of Ravenna, put an end to Greek rule in the Exarchate (752), the Imperial prefects of the Adriatic transferred themselves and their fleet to Zara.

The very disturbed period through which, not only Zara itself, but the whole of Dalmatia passed after that event, was certainly not of a nature to attract the craftsmen of Ravenna to the new seat of the Byzantine governors. They found much more profitable ways of employing head and hand, first in the Lombard Kingdom, and later in the new Frankish Empire. Then came the conclusion of peace between Charles the Great and the Emperor Nicephorus I. Zara became the capital of Byzantine Dalmatia, and the regular seat of the Proconsul or Strategos of the whole region; and it was then that plans were formed to embellish it with buildings corresponding to its new dignity. What better opportunity could present itself for the craftsmen of Ravenna to return in numbers to their own country, and, still associated with the Comacine or Lombard masters, betake themselves to work in Dalmatia, close at hand as it was and well known to them, where, among other buildings, one was to be erected, the most splendid of all, suggested by the famous chapel at Aachen? And I believe that this is exactly what happened. And so we are able to add some other names to the list, now almost complete, of buildings produced by the School of Ravenna.

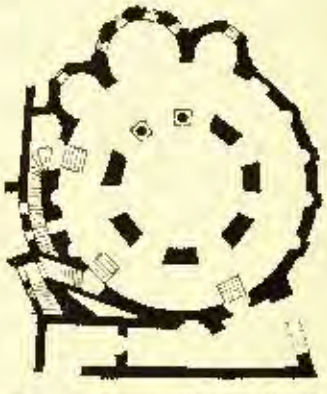


Fig. 210.—Zara. Ground plan of San Donato (about 801–806).

THE CHURCH OF SAN DONATO AT ZARA, already existing in the reign of Constantine VII Porphyrogenitus (912–958), originally bore the name of the Trinity. Later, according to tradition, it was called after the bishop who built it. Some[3,4] hold that it was founded by Donatus, bishop of Zara, who, according to Gams,[5] occupied the see between 801 and 806. And with this view I am in agreement.

[1] *Emporium*, 1898.—Arcioni, *La Rotonda di Brescia.*
[2] *Op. cit.*
[3] Hauser e Bulić, *Il tempio di San Donato in Zara.*
[4] *Emporium*, 1901.—Smirich, *Il tempio di San Donato in Zara.*
[5] *Op. cit.*

The church of San Donato is of concentric plan (Fig. 210). The interior is encircled by an aisle with a gallery above it, having piers and columns brought from older buildings, and carrying capitals of the Roman period. One of these has been altered, and on it are carved rude palm leaves, lilies, shells, and ovolos. The annular aisle on the ground floor is covered by a barrel vault with visible transverse arches. The upper floor had also originally a barrel vault, but is now covered by a wooden roof. Access to it was given originally by a small door on the north, the archivolt of which is decorated with canliculi and the bead and reel ornament.

Fig. 211.—Zara. San Donato (about 801–806).

Above this floor rose the drum of the cupola which fell at some date which we cannot fix. It has been replaced by an open timber roof. The traces of the dome suggest that it was conical, *i.e.* of the same form as that of San Vitale.

From the outer wall, which on the south side is strengthened by buttresses, three curvilinear apses project towards the east. They are continued in the upper story, and on the outside are decorated with very lofty blank arcading (Fig. 211).

Fig. 212.—Constantinople. St. Mary Panachrantos. Apses of the northern church (IXth or Xth and XIIIth or XIVth Centuries).

The form of San Donato, though of the circular type, is still, like the palace chapel at Aachen, inspired directly by San Vitale at Ravenna. Probably this was due to that law of imitation which at times has such influence in the history of art. Or else Bishop Donatus wanted to bequeath to the people of Zara a striking memorial of the peace, to the restoration of which he had so largely contributed, and in consequence of which their city had attained to the dignity of the Capital of Byzantine Dalmatia, in the form of a monument whose plan was derived from the same source as that of the most famous building of that age in Western Europe. Another reason might have been that the bishop had the idea of adopting for his church the model chosen by Charles the Great for the chapel of his own palace, in order to win the favour of the powerful monarch, and make him the chief contributor to the erection of the new building.

In the next place, the constructive idea informing the building is the same

Fig. 213.—Constantinople. St. Mary Panachrantos. Apses of the southern church (XIIIth or XIVth Century).

as that of the Palatine Chapel, viz. that of making the massive outer walls provide the main element of stability for the internal vaulting. So much is this the case that in places where the thickness of the walls has been diminished by the recesses hollowed out on the inside, care has been taken to compensate for it by external buttresses.

These considerations would lead one to imagine that San Donato was designed by the architect of the Palatine Chapel. But such an idea cannot be maintained, for the arrangement of the constructive elements is too rude to allow of it. A glance at the mammoth piers, set without regard to making the intervals between them equal, will carry conviction on this point. The Byzantine School could not have produced an architect so little sure of himself in the field of scientific vaulting as to be obliged to sacrifice the most elementary rules of proportion in order to carry out his design with safety.

My belief is that the architect came from Ravenna. The presence of that school of craftsmen is indicated by three characteristics: the conical shape of the dome, the peculiar plan of the narthex, and the blank arcading.

In the present state of things one cannot say what idea guided the creator of San Donato in his choice of so abnormal a plan for the narthex of the church he was designing; but it is clear that it was connected with that of a building well known to him, San Vitale at Ravenna, from which he also derived the form of his cupola.

As for the blank arcading which decorates the exterior of the apses, only an architect of the School of Ravenna can be credited with it. With the Greeks apses had hitherto been provided: (1) with buttresses set on a high plinth, with the object of keeping the wall firm against the thrust of the vault, as in St. George (Vth century) and Eski-Djuma at Salonica (Vth century); (2) with arcades filled by *transennae*, like St. Demetrius in the same place (Vth century); (3) with small arched niches, as may be seen in St. Sophia, also at Salonica (about 495). Of course the latter only applies when such niches are not the result of insertions in

Fig. 215.—Constantinople. St. Saviour Pantocrator. Apses (XIIth Century).

the form of small windows intended to provide more light for the mosaics of the apse, as in the case in St. Sophia at Constantinople (532–537).

It was not till later that the Greeks embellished their apses with blank arcading. It is true that the east end of the church of St. Mary Panachrantos at Constantinople shows this ornamental feature. But the building first erected by Constantine Lips in the reign of Leo VI the Philosopher (886–912) was restored by Theodora the mother of Andronicus II Palaeologus (1282–1328).[1] And owing to the thick coat of plaster with which the structure has been covered it is impossible to make even a cursory examination of the masonry with the object of distinguishing different periods in it, and the alterations it has undergone, so as to be able to decide how far it has been tampered with.

The study which I have made, and repeated in the course of the last few months, of this and the other ancient churches of Constantinople, inclines me to believe that, of the two small basilicas which compose St. Mary Panachrantos, the northern one (Fig. 212) still preserves the skeleton of the original structure, and is differentiated from the southern one (Fig. 213) by its apse and subordinate apses, unequal in height and dissimilar in shape, round the exterior of which runs a cornice with a damaged inscription mentioning Lips. The alterations, however, which have taken place in it are such that no argument can be based upon it, all the more when we consider that the church belonging to the convent of Myrelaion (919–945), erected shortly after Lips's work, has apses which are absolutely plain.

Fig. 214.—Constantinople. St. Mary Pammacaristos (XIth or XIIth Century).

Interesting examples of this form of wall decoration are presented by the apses of the churches of St. Mary Pammacaristos (Fig. 214), built by Michael Ducas and his wife Maria, sister of the Emperor Alexius I Comnenus (1081–1118),[2] and St. Saviour Pantocrator (Fig. 215), erected by the Emperor John II Comnenus (1118–1143), or rather by his wife Irene,[3] both at Constantinople; by that of the Holy Apostles at Salonica (Fig. 216), assigned by Bayet[4] to about the year 1012, but certainly later than the church of St. Elias in the same place, as is shown by

[1] [2] Du Cange, *Hist. Byz.—Constantinopolis Christiana.*
[4] *L'art byzantin.*

the more advanced decorative treatment of the exterior. It may be dated in the second half of the XIth century. Texier and Pullan[1] ascribed this church of St. Elias to the Xth century. But the presence of pulvins and Lombardic cubical capitals recalling those set up by Veremundus in the cathedral at Ivrea (973–1001 or 1002), indicates a date not earlier than the XIth. And the more advanced character of the exterior decoration compared with that of the church of the Virgin, also at Salonica (1028), will not allow us to place it before the middle of that century.

Fig. 216.—Salonica. Church of the Holy Apostles (XIth Century).

In Italy the apses of churches in the Pre-Lombardic style up to the fall of the Lombards (774) were embellished with arched corbel courses divided into groups by vertical rolls, or by lesenas as in San Pietro at Toscanella (739) and the parish church of Arliano (712–744). Later they began to be also adorned with deep arched niches grouped by lesenas, and of this form the apse of Sant' Ambrogio at Milan affords the earliest known example.

San Donato at Zara was therefore the first church to exhibit the motive of blank arcading applied as decoration to the exterior of apses. The idea of treating curvilinear walls in this way is a very old one. The vestibule leading to the Piazza d'Oro in Hadrian's Villa at Tivoli (125–135) still displays on its outer face a range of tall arches supported by rectangular pilasters. And as the School of Ravenna had been alone in keeping an honoured place for this motive for several centuries past, it is but logical and natural to credit the same School with the idea of applying it to the apses as well as the side walls of churches.

As for the builders of the church at Zara, in all probability, if not all, at least some of them were the same as those who worked on the Palatine Chapel at Aachen,

[1] *Op. cit.*

as is indicated by the masonry. That is to say they were Ravennate and Comacine masters, but not working under the direction of Byzantine master masons, as is proved by the timidity and want of finish in the construction of the vaulting. Their presence is also indicated by the few specimens of carving still surviving, executed expressly for the church. Thus the outer archivolt (*Fig. 217*) of the door leading to the staircase of the gallery (in which for the first time outside the easternmost geographical boundary of Italy we find the motive of cauliculi used as a cresting) reveals the hand of a Ravennate carver and not one of the best, a fact which can be verified by a glance at the archivolts of the ciborium of St. Eleucadius in Sant' Apollinare in Classe (IXth century), which also come from a Ravennate hand. On the other hand, the rude carving on a capital in the gallery betrays a Comacine chisel.

Fig. 217.—Zara. San Donato. External door of staircase (about 801–806).

The presence of Comacine and Ravennate carvers at Zara in the IXth century is no less clearly suggested by some carvings in the Pre-Lombardic style, to be ascribed to that source and date, which are preserved, with others of the Middle Ages, in the Museum attached to San Donato. Specimens of the Pre-Lombardic style may be seen in other Dalmatian towns, alike in composition, design, and execution, revealing a Ravennate or Comacine hand of the same date. Among them may be mentioned the ciborium archivolt built into the wall over the sacristy door in the cathedral at Cattaro (*Fig. 218*). It was executed for Andreaccio Saraceni, the founder of the cathedral (809).[1]

Fig. 218.—Cattaro. Duomo. Archivolt of ciborium (809).

Before leaving the Dalmatian coast, a few remarks may be made. Much has been written about the very interesting buildings of this region; but their true origin

[1] Jackson, *op. cit.*

and real, not imaginary, merits have never yet been stated. When that is done, and when those origins and merits have been freed from the mists of prejudice which have hitherto involved them, I believe that not a few surprises will come to light. Thus, for instance, it will be found that, with the exception of two new elements of decoration, viz. blank corbel arcades and zigzag bands in relief used for a cornice (a feature which had its origin in the bands of painting or ornament used by the Etruscans, Greeks, and other early peoples), the buildings of Diocletian at Spalato, which are merely an echo of older Roman Imperial structures of much vaster proportions, do not exhibit a single original motive. I will not even make an exception in favour of the spurred column bases, of which Choisy[1] gives a specimen; for in spite of the most minute search which I made in the palace, I was unable to discover in the ancient

Fig. 219.—Zara. San Grisogono (1175).

portions a single column base with these adjuncts, even of a merely geometrical kind.

In the same way it will be discovered that not a few of the Dalmatian ecclesiastical buildings to which a great antiquity has been ascribed, either because they are mentioned by Constantine Porphyrogenitus, or for other reasons, will be found to be less ancient than is generally supposed. It will also come out that the style of carving which I call Pre-Lombardic only made its appearance in Dalmatia some time after the end of the VIIIth century, that is to say, after it had been already created, practised, and diffused through Italy by the Comacine gilds. Another discovery will be that the Pre-Lombardic carvings preserved in museums, or still remaining in Dalmatian churches, were the work either of Ravennate or of Lombard masters. And in the latter case this will be a proof of the statement[2] that the IXth century Bans of Croatia,

[1] *Histoire de l'architecture.*

[2] Bulić, *I monumenti croati nè circondario di Knin ed altri contemporanei trovati altrove in Dalmazia dell' epoca nazionale croata*, in *Opera academiae scientiarum et artium Slavorum meridionalium.*

who went on pilgrimage to Cividale (a fact of which we have unquestionable documentary evidence), brought back thence, or from Lombardy generally, Comacine masters to undertake the construction of churches in the districts under their jurisdiction. In other cases they will be found to be late imitations of the work of those masters, rude even to the very lowest degree as being the productions of local carvers. And accordingly, some of these carvings attributed to the VIIIth or IXth century will find their proper place in the IXth and Xth, or even in the XIth century.

Further, it will be made clear that none of the leading characteristics of the Lombardic style appeared in Dalmatia before they had been in vogue in Italy. Finally, it will be found that the finest XIIth and XIIIth century Dalmatian churches, such as the cathedral of Zara, rebuilt by Archbishop Lorenzo Periandro (1245–1287), and consecrated in 1285,[1] San Grisogono, in the same town (Fig. 219), dedicated in 1175 by Archbishop Lampridio (1146–1179),[2] and the cathedral at Traù (Fig. 220) which the Florentine Bishop Tregnano (1206–1254 or 1255) in 1213[3] had built as high as the roof and covered in, are one and all pure imitations of older Italian churches in the Lombardic (Fig. 221) or Lombardo-Tuscan styles. Or else, while being imitations of such churches, they are carried out with a different distribution in some parts of the building of the decorative architectural elements, so as to give them a certain air of novelty, and allow them to be regarded as one of the many varieties of the Lombardic style. And to this variety we may give the name Lombardo-Dalmatian.

Fig. 220.—Traù. Duomo (1206–1254 or 1255).

We will not waste our time over the astounding statement made by some writers that the Croats of the VIIth and VIIIth centuries, because they were neighbours of the Byzantines, first learned, and then made their own, the art which I call Pre-Lombardic, so that they were able to introduce it into Friuli, whence it spread

[1] Farlati, *Illyricum Sacrum.—Ecclesia Iadertina.* [3] Bianchi, *Zara Cristiana.*
[2] Farlati, *Illyricum Sacrum.—Episcopi Tragurienses.*

throughout Italy. A barbarous people like the Croats was incapable of working such a miracle, either at that date, or even at the end of the XIth century, as may be gathered from William of Tyre:[1] "Dalmatia . . . . populo ferocissimo, rapinis et caedibus assueto inhabitata . . . . exceptis paucis qui in oris maritimis habitant, qui ab aliis et moribus et lingua dissimiles, Latinum habent idioma; reliquis Sclavonico sermone utentibus et habitu barbarorum." Moreover, how could they acquire from the Byzantines an art to which the latter were strangers, while they were adepts in another which in composition, design, and technique is so different from the Pre-Lombardic? On the other hand, the records of the life of a national art are to be found, not in the imaginative assertions of writers, but in monuments of ascertained date; and such are entirely wanting to the proof of the existence of the supposed Croatian School.

Fig. 221.—Bergamo. Santa Maria Maggiore (1137).

Nor is there any more substantial foundation for the belief in an imaginary influence on Dalmatia of Northern and Transalpine styles of art through the medium of Hungary:[2] an influence specially manifested in the cathedral of Traù through the links connecting that building with the church of Ják, which is dated, without a single fact to support the statement, in the middle of the XIIIth century. For, above all, we must remember that the cathedral of Traù is indissolubly connected with the name of an Italian, its second founder, Bishop Treguano; without taking into account that it may well have been that the undated church at Ják was erected by Dalmatian hands, and was derived from Traù, and not *vice versâ*. In any case, all the most salient features of the cathedral of Traù may have been derived by its architect from Italy, where they had been invented and practised long before they were to be seen beyond the mountains and beyond the seas.

[1] Migne, *Patr. Lat.*, Vol. 201.—*Guillelmus Tyrensis archiepiscopus—Historia rerum in partibus transmarinis gestarum.*

[2] Jackson, *op. cit.*

CHAPTER V

PRE-LOMBARDIC ARCHITECTURE

FROM THE CONQUEST BY CHARLES THE GREAT DOWN TO THE APPEARANCE OF THE LOMBARDIC STYLE, AND ITS COMPLETION

NEW styles of architecture are never new creations of the human intellect, but are always evolved from older forms. Art never dies; and though we sometimes see it lying prostrate like a corpse, yet it is always ready to rise up again when the breath of life has once more been breathed into its frame.

This bringing back to life, when art re-awakens to mark a new epoch of culture, does not happen instantaneously nor on a single occasion, but more or less slowly and by stages, in which efforts to climb the rugged ascent, under conditions of peace and plenty, alternate with intervals of suspense, preparation, renewal.

And so, the architectural movement which took place, first in Italy, and then beyond the Alps, in the course of the XIth century, was preceded by a long period during which the monuments of Rome and of Ravenna were studied, and laborious experiments were made again and again which were destined, by means of a fusion of the Pre-Lombardic with the Romano-Ravennate and Byzantino-Ravennate elements, to transform Roman into Lombardic art.

We have already seen how, as far back as the time of Theodelinda (590–625) and Agilulf (590–615), art had awakened from the lethargy into which it had sunk under the barbarian invasions, pestilence, famine, and flood, from which Italy had suffered, and how from that period down to the fall of the Lombard Kingdom it had had opportunities, thanks to the piety of the Lombard princes, both for its exercise and for making some progress along the path which was to lead it to the new forms which made their appearance after the Xth century. And we shall see, when the time comes to describe the monuments of Germany, how the short-lived resurrection of Byzantino-Ravennate architecture which followed Charles the Great's conquest (774) contained a new germ of life for the Pre-Lombardic style, which was destined to hasten its development.

Let us now see when and where this germ had the opportunity not merely of showing the bud, but also of producing first the flower and then the fruit of Lombardic architecture.

It is well known that Angilbert II, archbishop of Milan (824–860), as early as the reign of Lothair I (840–855) and Pope Sergius II (844–845), shook off the authority of both king and pope. It is also clear that his work, interrupted under the weak Tado (861–869), was continued by the proud prelate Anspert (869–882); and it is equally well known that from Angilbert II to Aribert (1018–1045), who closed

the epoch of the archiepiscopal régime at Milan, the occupants of that see stood forth as the emancipators of North Italy from foreign rule only to make it the slave of their own ambition. What wonder, then, if the archbishops, mindful of the fact that great buildings are intimately connected both with pride and politics, affirmed their wealth, their greatness, their authority, by rebuilding the fallen walls of the city, and by the erection of sumptuous buildings both in it and in the districts subject to their spiritual jurisdiction?

It is, in fact, just at the period when the chair of St. Ambrose was filled by the two prelates who were the founders of the supremacy of the archbishops of Milan, that I place the beginning of the compromises, the experiments, the search for elements which, when developed, would enable ecclesiastical architecture to expand in new directions destined to mark the victory of the Christian religion in the West, just as Byzantine architecture had already marked its triumph in the East, only that the latter had had the advantage of being formed and developed under the protective shadow of the new capital of the Empire, after Christianity had become the official religion.

The stages of development which were traversed between this starting-point and the first appearance of the Lombardic style may be, to all intents and purposes, summed up as follows.

The primary interest of the Lombard gilds was the study of vaulting construction and the art of counterbalancing its thrust. This study had been till then neglected by them, as they were too timid either to emancipate themselves from the regular forms of the Latin Christian basilica as it existed in the centuries following the publication of the Edict of Milan (313), with its exclusive use of wooden roofs for nave and aisles, or to attack problems to which their constructive or statical attainments were unequal. So that, down to Carolingian times, they confined the application of vaulting to the apses and rather limited crypts of their basilicas. Possibly, too, it was used in baptisteries, none of which, however, have survived; but it is probable that both their forms and dimensions were of a modest character.

And so, their first attempts to put these studies into practice were devoted to vaulting the whole of chapels and baptisteries which, in contrast to those just mentioned (sometimes without even vaulting to cover them), exhibited forms which grew steadily more complex and developed. At the same time they began to vault the bays of a church in front of the apse, in cases where it became necessary to increase the chancel space, with the result that it was only the body of the church which continued to be covered by an open timber roof or ceiling.

In these buildings, too, they began to use external buttresses corresponding to the arcades of the interior, with the object of increasing the stability of the structure, and also of indicating its internal constructive arrangement. Later they proceeded to throw across the aisles transverse arches springing from compound piers and wall piers, again with the idea of stability. Next they threw arches across the nave, supporting them on substantial cruciform piers, alternating with columns or smaller piers, and on wall piers, thus binding the whole structure together in an organic unity.

The next task was to cover the naves of their churches, and this they did first with barrel vaults, strengthened by transverse arches; then with cross combined with barrel vaulting of the previous kind; lastly with raised cross vaults, with the groins strongly emphasized thoughout their whole course, or else ribbed to serve

the triple purpose of facilitating the construction of the vaulting, and of increasing both its strength and decorative effect. From these ribs were developed the vertical shafts which resulted in giving a more complex and at the same time more varied form to the compound piers. Groined vaulting of this kind was at first only used for the aisles. Later it was extended to the nave, and this increased the variety and complexity of the forms of pier support.

Such was the evolution of the vaulted Lombardic basilica. Each of the phases we have described was accompanied by motives of decoration and ornamentation which were either original, or borrowed from the Pre-Lombardic architecture of the Lombard age, or else from the Romano-Ravennate and Byzantino-Ravennate styles which preceded it.

The buildings which we shall pass in review, forming a series of types arranged in chronological order, will furnish the evidence for this evolution. At the same time they will provide ample materials for following out the various phases in the creation of the Lombardic style, and for determining the characteristics which distinguish the Pre-Lombardic buildings of the IXth and Xth centuries, providing thus considerable assistance for future chronological classification. In this examination we must include some monuments which, though they throw no new light on the origins of Lombardic architecture, will serve to illuminate our path when we come to the second part of our work.

THE CHURCH OF AGLIATE.—Giulini,[1] on the authority of a biographer of the archbishops of Milan, whose work, some three centuries old, he possessed in manuscript, refers to the foundation of the collegiate church of Agliate by Anspert (869–882), remarking that, although we know nothing of the evidence on which this statement is based, at the same time it is not to be treated with contempt. I think it more likely that the church was built under Angilbert II (824–860), to take the place of an older structure believed by some to have been erected by St. Datius in the middle of the VIth century, and that Anspert afterwards endowed it with a college of canons. This theory turns out to be a fact when we come to examine the building, and subject it to that comparison with others of the same period which is always so fruitful of results.

It consists of a nave and aisles with wooden roofs, separated by stone columns surmounted, with one exception, by ancient altars, inverted bases, sepulchral cippi, turned into capitals which support tall misshapen abaci. The nave and aisles terminate in three semicircular apses, the bays in front of which are vaulted and separated from one another by walls.

The material of which the rough masonry is composed is mainly large pebbles worn smooth in the bed of the Lambro, and this accounts for the prevalence of "opus spicatum" in it. The building is finished with a simple cornice of tufa on which the roof rests. It is lighted by numerous narrow round-headed windows of double or single splay, and also by two luminous crosses, one in each gable of the nave, intended to ventilate the timbers of the roof. It should be mentioned that there are no windows in the wall of the north aisle.

The doors are crowned by relieving arches. The principal door in the west front, before the modern sculpture was put up, had curvilinear interlacing decoration of IXth century character.

The crypt underneath the apse and chancel is not original: the form of its

[1] *Op. cit.*

vaulting indicates a reconstruction which probably took place about the year 1000. But the capitals in the Pre-Lombardic manner of the VIIIth and IXth centuries are original. One of them, a cube bevelled off at the angles and decorated with leaves carved out of a niche, caulicoli, and interlacing—a skilful piece of work for the time, and certainly not the deplorable production of some rude rustic carver, as it has been described, may be compared both in design and execution with the original capitals in Theodulf's church at Germigny des Prés (801–806), and with the one which we have already noticed in the old crypt of San Filastrio at Brescia (VIIIth century). This circumstance, taken in connection with the likeness between the capital in question and the original ones in the church of San Satiro at Milan (876), and also with the more advanced character of the latter, gives good ground for fixing the date of the basilica of Agliate in the IXth century; earlier, however,

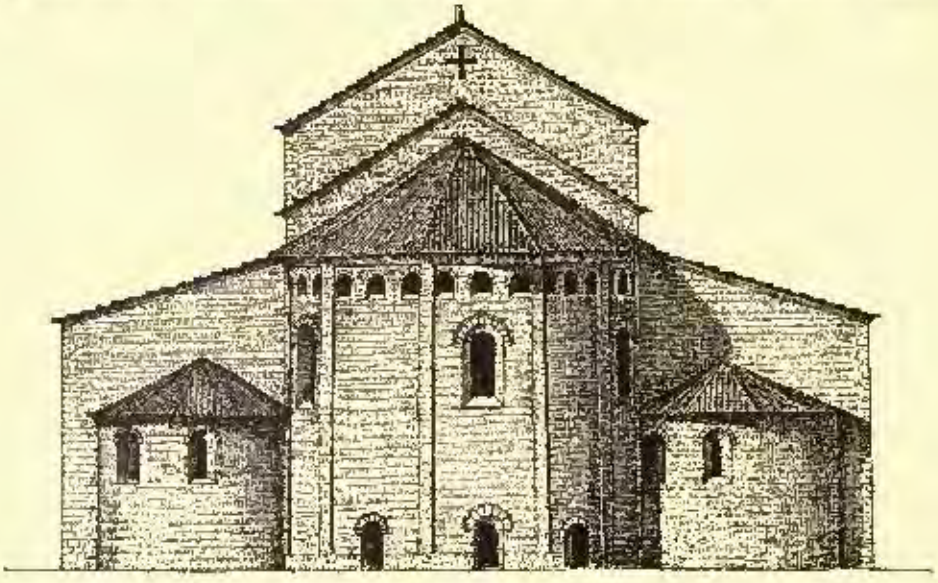


Fig. 222.—Church of Agliate (824-860).

than the episcopate of Anspert (869–882), and, to be precise, in the time of Archbishop Angilbert II (824—860).

In the arches of the nave, and the archivolts of the windows and doors (with the exception of the great west door), are interpolated voussoirs of tufa and bricks framed by a ring of bricks laid horizontally. This makes a simple but elegant decoration, contrasting with the rough surface of the wall. It is quite a new feature, and does not occur, so far as I know, in any other building earlier than the IXth century. It was derived from the arches of tufa alternating with bricks, in use among the Romans from the IInd century onwards. Their appearance may be seen in the ruins of the Villa known as the "Sette Bassi" on the Via Latina near Rome.

The outer wall of the apse (Fig. 222) is decorated at the top by a range of small arched niches, grouped in threes by lesenas which carry the eaves cornice, just as in the central apse of Sant' Ambrogio at Milan. The two chapels flanking the apse have on the outside buttresses corresponding to the arcades of the interior, so that this is another reason for placing the church in the same period as that in which the eastern end of the Ambrosian Basilica was given its present form, that is to say the time of Angilbert II.

THE BAPTISTERY OF AGLIATE has the plan of an almost regular nine-sided figure, two sides being taken up by an apse for the altar. The outer facing of its rough walls shows that it belongs to the same age as the neighbouring church. This is proved both by the character of the materials and the way in which they are employed.

Each side of the polygon, except the one to the north, is pierced high up by a rather narrow double splayed window. Above the windows runs an arched corbel course, and above this a range of arched niches surmounted by a plain tufa cornice on which the roof rests. The building is covered by a cupola.

Its form recalls that of the baptistery belonging to the cathedral of Grado (571–586), but it is distinguished from it by the number of the sides of the polygon, by the shape of the apse, and by its relative position with respect to the church which it was intended to serve.

Fig. 223.—Susa. "Opus spicatum" in the town walls (IVth–VIth Centuries).

The extensive use of "opus spicatum" in both buildings at Agliate demands some notice. It is a method of construction which goes back to a remote period. Employed in brick floors as long ago as the time of Augustus (29 B.C.–14 A.D.) ("item testacea spicata tiburtina sunt diligenter exigenda"),[1] in the decadence of the Roman Empire it passed from the pavement to walls, as may be seen from the town walls of Susa erected between the IVth and VIth centuries (Fig. 223). North of the Alps, an ancient instance of walling material laid herring-bone wise is afforded by the remains of a Roman villa discovered at Littleton in Somerset, and the same thing could be seen not long ago in a Roman building at Castor in Northamptonshire. Both belonged to the period between the IIIrd and Vth centuries.

In Italy the use of "opus spicatum" for walls had a very varied history. At Rome it never took hold. There are only very scanty traces of it in the walls of Rome, that mosaic of constructive methods beginning with the reigns of Aurelian (270–275) and Probus (276–282) and coming down to our own times, which, if ever they are made the subject of a careful study, will be found to provide a chronological picture of the conditions and practice of the art of building at Rome during some sixteen hundred years. Nor was it more successful in establishing itself at Ravenna. It is rare, again, at Pavia. On the other hand, it was very popular at Verona and in North Italy generally, especially in Lombardy, where we not only find it frequently employed (particularly in buildings from the VIIIth to the XVth century), but also more firmly rooted than in any other region of Europe. And this leads me to suspect that its birthplace in Italy was Cisalpine Gaul.

[1] *Vitruvius de architectura*, VII.

The suggestion for the method probably comes from the fact that builders in the districts near the Alps were obliged to make use of the large pebbles which had been worn smooth in the beds of the rivers. Given the use of such materials, the arrangement of it which was adopted was the more intelligible because, compared with the irregular method known as "opus incertum" generally used for pebble construction by Roman builders, it offers the double advantage of not requiring so much mortar and of producing a more pleasing effect for the eye.

It is probably the Comacine gilds who are to be credited with the transmission of "opus spicatum" through the darkest ages of barbarism, for they were the largest users of it throughout the Middle Ages: above all, the gild of Campione, which I believe to be responsible for the finest-herring bone work known.

Its employment was sometimes due to a mere whim of the builders (perhaps with the object of indicating the participation of a particular gild in the work), or else to the convenience of using up chippings, as at Milan in Sant' Ambrogio, San Vincenzo in Prato (835–859), San Calimero, the apse of which was ascertained by Cattaneo[1] to belong to the IXth or Xth century, San Celso, rebuilt in 996 by Archbishop Landulf (980–998),[2] and Sant' Eustorgio which, as we shall see, must go back to the Xth century, and others. In these churches the "opus spicatum" is generally formed of bricks smaller than those used for building, but also sometimes of broken tiles shaped for the purpose, laid end-wise in courses, or in two rows separated by a course of bricks or merely a bed of mortar.

In other cases its use depended on constructive needs, as in the outer wall of the Castle of the Visconti at Agrate (XIVth century) and the numerous private buildings grouped round it. They are all built with the large pebbles which abound in the district, combined with some fragments of stone or brick. Another instance is the wall of the Castle of Bramafam near Aosta (XIth century). In a third class it was due to a combination of decorative and constructive purposes.

Basilica of San Vincenzo in Prato at Milan.—The monastery was originally founded by the Lombard king, Desiderius (770). When Archbishop Angilbert II in 835 took its abbot Gaudentius († 842) to transfer him to Sant' Ambrogio, the convent of San Vincenzo merely possessed a chapel, as it did during Odelpert's tenure of the see of Milan (805–814).[3] Some have been surprised that a monastery of sufficient importance to provide an abbot for Sant' Ambrogio should have nothing better than a chapel,

Fig. 225.—Milan. San Vincenzo in Prato. Capital in the crypt (770).

[1] *Op. cit.*

[2] Giulini, *op. cit.*

[3] *Thesaurus antiquitatum et historiarum Italiae transpadanae et Alpibus vicinae.* · Puricelli, *Ambrosianae Mediolani basilicae ac monasterii &c.*

and an imaginary basilica has been created. But, to take one instance, the monastery of Saint Guilhem du Désert, originally at Gellone, founded by William, Duke of Aquitaine, after he became a monk, possessed at first only a chapel.[1]

The erection of the present San Vincenzo is consequently later than the year 835. With this occasion we may connect the notices[2] of donations to the monastery made by Abbot Giselbert, the successor of Gaudentius, and of legacies bequeathed to him. In 859 the structure must have been finished, as the bodies of Saints Quirinus and Nicomedes were translated into it.[3] Cattaneo[4] thinks that this took place at the consecration of the church.

Fig. 224.—Milan. San Vincenzo in Prato (835–859).

The exterior still retains its original features. The apses (Fig. 224), with the range of arched niches and their arched corbel courses divided into groups by lesenas, copy the decorative forms of those in Sant' Ambrogio. The side and front walls are plain. The pediment, however, of the latter, like the corresponding one at the east end of the church, is decorated by an arched corbel course following the slope of the gable, and by a small cruciform window enclosed in a frame, an original motive to be seen in some churches of the Lombardic and derived styles.

The interior, divided by columns into a nave and aisles with wooden roofs, shows the alterations made in the early years of the XIth century, or, to be more accurate, about the year 1023, when Archbishop Aribert (1018–1045) deposited the body of St. Abundius in the church.[5] The changes which then took place are seen in, among other things, the spacious and lofty crypt beneath the chancel (the old crypt was

[1] Mabillon, *Acta sanctorum ordinis S. Benedicti—Vita S. Willelmi ducis ac monachi Gellonensis in Callia.*
[2] *R. Istituto lombardo di scienze e lettere*, 1868.—Belgioioso, *La basilica Milanese di San Vincenzo in Prato.*
[3] Giulini, *op. cit.* [4] *Op. cit.* [5] Giulini, *op. cit.*

apparently confined to the space under the apse, the floor of which would be only a little higher than that of the church), where the cross vaulting, with its strongly marked groins and visible arches, exactly corresponds to the date just mentioned. In this crypt may be seen a capital (Fig. 225) belonging to the same period as

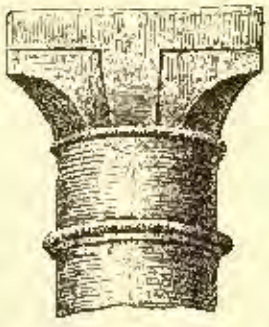


Fig. 226.—Milan. San Vincenzo in Prato. Capital in the nave (about 1023).

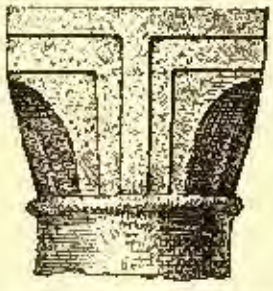


Fig. 227.—Como. Sant' Abondio. Capital (1013–1095).

another in the left-hand arcade in the church, and exhibiting the Ravennate style of the VIIIth century. Both belonged to the original foundation of 770.

Another indication of the changes made is the presence in the nave of capitals (Fig. 226) recalling the type of one (Fig. 227) in the interior of Sant' Abondio just outside Como (1013–1095), and consistent with the suggested date.

Fig. 228. Milan. San Satiro. Capital (876).

Fig. 229.—Milan. San Satiro. Capital (876).

THE CHURCH OF SAN SATIRO AT MILAN was erected by order of Archbishop Anspert, together with the adjacent bell-tower, in 876.[1] The fact is mentioned in the prelate's epitaph, and in his will which may be found in Muratori.[2]

The sketch of the original ground-plan, preserved in the Ambrosian Library at Milan,[3] recalls in its internal arrangements that of the church of Germigny des Prés (801–806). The exterior originally exhibited a succession of exedras. It was, and is, vaulted in all parts. The domed

Fig. 231.—Milan. Capital in tower of the Monastero Maggiore (869–882).

[1] Giulini, *op. cit.*
[2] *Antiq. Ital. medii aevi—Dissertatio LVI.*
[3] *Rassegna d'arte*, 1901.—Beltrami, *Bramante a Milano.*

tower which it must have originally possessed has been replaced by the present octagonal cupola.

Two Pre-Lombardic cubical capitals (Figs. 228, 229) are to be noticed, belonging to the age of the founder. They recall one which we observed in the church at Agliate, and show the forms and ornamental motives followed by the Lombard carvers for capitals in the second half of the IXth century. These artists further left the mark of their chisels on five of the eight capitals in the square tower of the Monastero Maggiore at Milan (Fig. 230) belonging to the time of Archbishop Anspert (869–882). I mean those of cubical form (Fig. 231) carved out of the same block of stone as the shaft and base, and carrying pulvins from which spring arches showing a reconstruction later than the period about the year 1000.

Fig. 230.—Milan. Tower of the Monastero Maggiore (869–882).

By itself, San Satiro would possess only a small amount of interest for us were it not for the adjoining campanile (Fig. 232). This is a massive square tower, almost entirely built of brick, the highest stage, *i.e.* the bell-chamber, being evidently a later addition. Its date is very important, and confers on it the claim to be considered the prototype of the Lombardic campanile. Previously, bell-towers on a large scale did not present an architectural scheme like that which characterizes the campaniles of the Lombardic and derived styles, and that of San Satiro among them. The two oldest examples that I can adduce the "Monks Tower" of Sant' Ambrogio at Milan (789–824) and that of Santa Maria della Cella at Viterbo (IXth century), are sufficient evidence of the statement.

The former of these, which is recognized as having been erected after the Benedictines had been settled in the new monastery of Sant' Ambrogio (789), was increased in height by one story, the present bell-chamber: this has been made clear recently when the walls were stripped. In the original part the only artistic elements are the supports of the two-light openings constructed of materials brought from elsewhere.

The latter, which no one has previously used as evidence, in its topmost stage

exhibits (Fig. 233) two-light openings divided by octagonal shafts with cubical capitals, chamfered at the angles, and supporting very tall pulvins moulded like a cornice. Its date may be placed in the time of Pope Leo III (795-816), and for this reason. It was the Lombard king, Desiderius (756-774), who raised Viterbo from political obscurity by taking up his station there with his forces when he broke with Pope Hadrian I. And it seems[1] that it was then that the town was provided

Fig. 232.—Milan. San Satiro. Campanile (876).

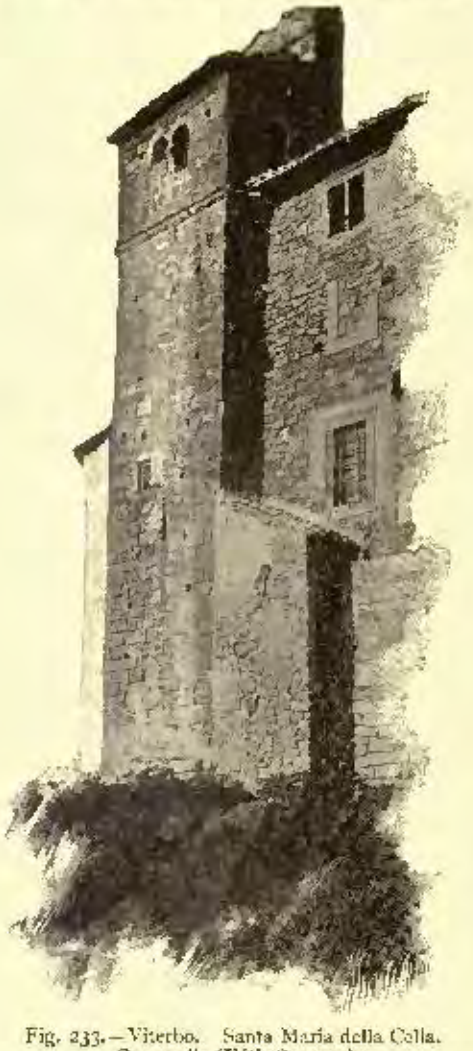


Fig. 233.—Viterbo. Santa Maria della Cella. Campanile (IXth Century).

with the fortifications mentioned in a document of 808 in the Farfa Register. The building of a church would naturally follow, viz. San Lorenzo, which has now disappeared, and the foundation by the powerful abbey of Farfa of a convent or "cella" as it was then called. As a matter of fact, it is in a document of 775 in that Register that we find the earliest mention of the "Oratorium S. Mariae de Cella" with monks and a "praepositus" appointed to administer its property.[2] The possession of this "cella" of St. Mary in the castle of Viterbo was later, in 801, confirmed by Charles the Great to the monks of Farfa.[3]

[1] Pinzi, *Gli ospedali medioevali e l'ospedale grande di Viterbo.* [2] Pinzi, *Storia della città di Viterbo.*
[3] Pinzi, *Cenni storici sulla chiesa e confraternita di Santa Maria della Cella in Viterbo.*

It is with this last occasion that I believe the erection of the campanile is to be connected. Leo III's return to Rome and the coronation of Charles the Great (800) were the signal for a renewal of the activity in building in the City and Duchy of Rome which had distinguised the pontificate of Hadrian I (772–795). We need not, then, be surprised if the abbot of Farfa was also inspired to undertake fresh works in a church which belonged to and was the offspring of his own abbey, the superior rights of which had just been confirmed by the Emperor. As a matter of fact, the four cubical capitals of Pre-Lombardic style in this campanile carry pulvins with the features which made their appearance in Carolingian times, and of which examples may be seen in the church of Germigny des Prés. The horse-shoe arches, too, which spring from these capitals only made their first appearance, so far as the West is concerned, in buildings of the early years of the IXth century, as we shall see when we come to deal with Theodulf's church. These two features might almost make one suspect that the man who designed the tower of Santa Maria della Cella had previously taken part in the erection of that church before the Benedictines of Farfa employed him in the works connected with the Cella at Viterbo.

Further, the facing of the walls shows, to an experienced eye, considerable likeness to that of the walls of San Pietro at Toscanella (739), which is not the case with the early XIth century buildings at Viterbo, *e.g.* the church of San Giovanni in Zoccoli (1037). This circumstance will put the campanile at a period not far from the VIIIth century, rather than in the XIth, and at the same time suggests the presence of Comacine masters.

THE PARISH CHURCH OF SAN LEO.—The date is given by the ancient altar ciborium constructed by order of Ursus, Duke of Ferento, in the time of the Emperor Charles the Fat (881–887) and Pope John VIII (872–882), as is stated in the still existing inscription published by Marini.[1] The stones and the four marble

Fig. 234.—San Leo. Parish church. Capital of ciborium (881–882).

Fig. 235.—San Leo. Parish church. Capital of ciborium (881–882)

columns of this ciborium may be seen worked into the present baptistery: the capitals (Figs. 234, 235) are set round it.

These capitals, the date of which is certain, show, though with somewhat greater refinement, the same Pre-Lombardic forms as some others (Fig. 236) used in the original decoration of the exterior of the church, and evidently belong to the same date. So that we need have no hesitation in saying that the church was built between 881 and 882. They are cubes hollowed out at the lower corners, with the recesses filled by plain leaves bearing sometimes a rosette, or a lily, or a leaf with indented outline, or striations. This design of leaves with leaves of a different kind or other

[1] *Saggio di ragioni della città di Sanleo detta già Monteferetro.*

ornaments carved upon them was freely used after the epoch of 1000. Among other churches, the cathedral of Aquileia (Fig. 237), built by the patriarch Poppo (1017 or 1019–1042 or 1045), who consecrated it, according to Gams,[1] in 1027 or 1029, and altered by the later patriarch Marquard (1365–1381), presents examples of it in the capitals of the nave. Their faces show cauliculi, leaves, roses, bunches of grapes, crosses curled at the extremities, interlacings, &c.

Fig. 236.—San Leo. Parish church. Capital from the exterior (881–882).

In the variety and novelty of motives (some of which may be seen repeated in the Corinthianesque capitals of Lombardic style belonging to the XIth and XIIth centuries) they surpass those in San Satiro at Milan (876), and are the best certainly dated IXth century specimens which we can point to either in Italy or north of the Alps.

The nave and aisles of the church of San Leo must originally have been separated by columns, some of which have been encased in the supporting piers constructed when the present vaulting took the place of the old wooden roof. The nave terminates in an apse flanked by two minor apses. All three, together with the presbytery, are somewhat raised up owing to the crypt below, now closed and filled with rubbish.

The exterior was decorated by arched corbel courses grouped by lesenas (Fig.

Fig. 237.—Aquileia. Duomo (XIth and XIVth Centuries).

238). The original method of lighting the building was by rather narrow double-splayed windows, and loops splayed inside. Of the three side doors, two are sur-

[1] *Op. cit.*

mounted by blank loggias projecting from the wall, with shafts finished by small Pre-Lombardic cubical capitals. The front of the church is concealed by a modern building.

The church of San Leo gives us several important pieces of information. It tells us that in Italy, at the close of the IXth century, churches still retained the form of the Latin basilica, and had wooden roofs with or without a ceiling for their naves and aisles. It also tells us that in that period, though spacious crypts were constructed under the chancels, they did not result in an excessive or even marked elevation of the latter. Indeed, the chancel at San Leo, even taking into account the modern raising of the level of the nave, can only have been elevated by a step or so above the floor of the body of the church.

Fig. 238.—San Leo. Parish church (881–882).

Further, it informs us that the Lombard gilds, who alone can be regarded as responsible for the construction of the church, still followed for capitals the Pre-Lombardic cubical forms of the VIIIth century, and that the Lombardic types had not yet come into existence.

And it teaches us that in the IXth century these gilds favoured two types of external decoration for their churches.

The first was a rather rich treatment, but applied on principle only to the most important part of the building, *i.e.* to the apse. To this type belong the churches of Agliate (824–860) and San Vincenzo in Prato at Milan (835–859); and, in all probability, Sant' Ambrogio at Milan, as built by Angilbert (824–860), was another instance.

The second type of decoration was simpler, but extended, so far as we can judge, at least to the side walls of the building. To this type are to be referred the parish church of San Leo, and the church of San Pietro al Monte at Civate (Fig. 239), the original portions of which (belonging unquestionably to a church with a single apse, the one at the opposite end being a later addition) are ascribed,[1] and I think rightly, to the IXth century, and not later than the year 860.

Finally, it tells us that in the IXth century, as before, the Italian artists were more successful in carving slabs than capitals. For proof one has only to compare the carving of the capitals belonging to the ciborium at San Leo with that of the

[1] *Archivio storico lombardo*, 1896.—Magistretti, *San Pietro al Monte di Civate*.

marble tympanum (Fig. 240), the work, I should say, of a Ravennate hand, built into the exterior of the south aisle of the cathedral of Pola, which was consecrated in 858

Fig. 239.—Civate. San Pietro al Monte (IXth Century).

by Bishop Andegisus (854–859).[1] The movement of the birds flanking the bishop's monogram, and the technique shown by them and also by the peacocks on either

Fig. 240.—Pola. Duomo. Tympanum on the exterior (857).

side of the inscription, recall the well-known pluteus in Santa Maria degli Angeli, near Assisi, which is believed to be a production of the IXth century.

THE BASILICA OF SANT' EUSTORGIO AT MILAN was erected on the ruins of the old basilica of the same name belonging to the first half of the IVth century. Cattaneo[2] believes that portions of it, viz. the apse and the two plain arches at the extremity of the nave supported by piers, are work of the end of the IXth century or

[1] Gams, *op. cit.*

[2] *Op. cit.*

the beginning of the Xth; while he regards the rest as a reconstruction of the XIth and following centuries. And he seems to me to have almost exactly hit the mark.

The decorative treatment of the exterior of the apse (Fig. 241), where the brick facing shows a free use of regular courses of "opus spicatum," gives ground for placing the rebuilding of the ancient church between the period in which San Vincenzo in Prato was erected (835–859) and the year 996, when the reconstruction of San Celso took place, the apse of the latter belonging to this occasion. The reason is that, on the one hand, the niches round the apse of Sant' Eustorgio are still low, and the lesenas project very little from the face of the wall and merge in the arches which frame the niches, as in the apse of San Vincenzo in Prato where the lesenas measure about 1 ft. × 3 in. On the other hand, the niches are not as yet so elongated as those at San Celso, and the lesenas, though they no longer group the niches into threes, the scheme followed both in the apse of San Vincenzo in Prato and in those of Sant' Ambrogio (789–824), the church of Agliate (824–860), and San Calimero at Milan (IXth or Xth century), are not strengthened by sturdy buttresses as in the apse of Landulf's church. The latter method of giving support was suggested by Roman work, as may be seen from Montano,[1] and from the ruins of a building with an apse in the Villa of the "Sette Bassi" on the Via Latina near Rome (IInd century). Here the apse is kept up by three massive buttresses (Fig. 242).

Fig. 241.—Milan. Sant' Eustorgio. Apse (Xth Century).

The large brick piers of T form belonging to the two easternmost arches of the nave, discovered during the last restoration, and found to belong to the original church which was altered after the year 1000, enable us to fix more precisely the date

[1] *Op. cit.*

at which it was rebuilt, and place it definitely in the first half of the Xth century. We may reasonably infer that a complete series of such piers originally divided the nave from the aisles; and they were intended to carry, not only the longitudinal arches of the nave, but also the transverse ones which spanned the aisles. The nave, apparently, was not so treated on account of its considerable width—about 40 ft. Though churches of Roman basilica type were to be seen in Italy before the Xth century with nave and aisles separated by piers of T shape, *e.g.* San Vittore at Ravenna (VIth century) and the parish church of Bagnacavallo (VIth century), such piers supported only longitudinal arches. Even in the first half of the IXth century, and at Milan, the nave of San Vincenzo in Prato was separated from the aisles by columns which carried the longitudinal arches and no others. Nor was the

Fig. 242.—Rome. Villa called "Sette Bassi." Apse with buttresses (IInd Century).

case different with the church of San Leo (881–882) in the second half of the century. But in the second half of the Xth century the organic conception of transverse arches, though confined to the aisles, which was evolved in Sant' Eustorgio, is found in its full development in SS. Felice e Fortunato near Vicenza, where transverse arches probably spanned the nave as well. And at the dawn of the XIth century San Babila at Milan was able to show Lombardic piers and a complete system of vaulting for both nave and aisles.

THE PARISH CHURCH OF MONTALINO AT STRADELLA has a nave and aisles separated by piers, and ends in a central and two minor apses, one of the latter having been destroyed to make way for the present campanile. The piers consist of a rectangular block with two half-columns on the smaller sides and two roofing shafts

on the larger. Each column ends in a large torus, above which is a Pre-Lombardic cubical capital with the lower corners bevelled off (Fig. 243). From these spring the semicircular longitudinal arches which carry the walls of the nave. The roofing shafts originally ran up to the top of the walls to support the tie-beams of the roof which extends unbroken over both nave and aisles. To these four cruciform piers correspond a similar number of wall piers, which were also carried up to support the beams of the roof.

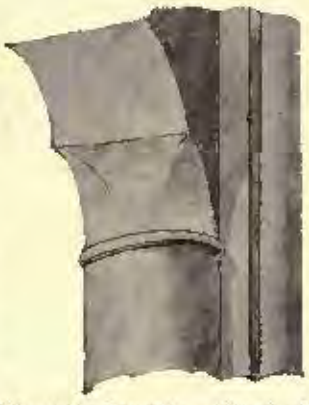


Fig. 243.—Stradella. Church of Montalino. Capital (Xth Century).

Nowadays the walls of nave and aisles show traces of alteration at the top. The members which supported the roof have been cut short, and the roof itself reconstructed without regard to their original functions. The adoption of piers and wall piers to carry the framework of the roof has enabled the outer walls and those of the nave to be reduced in thickness. The original windows were mere loops, round-headed and splayed on both sides.

The exterior was decorated with arched corbel courses interrupted by lesenas. In the apses (Fig. 244) the eaves cornice is composed of a cable moulding bordered by the saw-tooth ornament. This is the first appearance of this moulding as an element of decoration in Lombardic buildings. Its use was due to the School of Pavia, which borrowed it from the Romans; and we may see it in San Michele, and San Pietro in Ciel d'Oro at Pavia, and other churches.

The date of the church at Montalino is not ascertained. Still, we know that Stradella or Montalino was given in 943 by the Italian kings Hugo and Lothair to Litifred, bishop of Pavia, who, according to Gams,[1] filled the see from 939 to 967. The donation was confirmed by the Emperor Otho II to another bishop of Pavia, Peter III (978–983).[2] And it is more than likely that the bishops of Pavia, having acquired the lordship of Montalino, undertook the erection of a parish church. If so, it must have been built after the year 943, or at latest after 977.

Fig. 244.—Stradella. Church of Montalino. Apses Xth Century).

The forms of the original windows and of the capitals suggest a date nearer to the IXth than the XIth century: and the years of Litifred's episcopate following 943 are probably those which saw the erection of the

[1] *Op. cit.*

[2] Cavagna Sangiuliani, *La basilica di San Marcello in Montalino.*

building. This date would be confirmed by the presence of piers which no longer follow the early T form of those in Sant' Eustorgio at Milan (first half of the Xth century), while at the same time they are not yet complete compound supports with continuous Lombardic capitals, as in SS. Felice e Fortunato near Vicenza (985).

It remains to be noticed that the constructive idea which guided the Lombard gild in carrying out the work, viz. to make the piers bear the framework of the roof, and to construct them from the base upwards as though they were to carry vaulting instead of a timbered roof, forms a sort of anticipation of the more developed plan of SS. Felice e Fortunato, and must therefore be of earlier date, and form one of the stages traversed by the Lombard builders in their progress towards the vaulted Lombardic basilica.

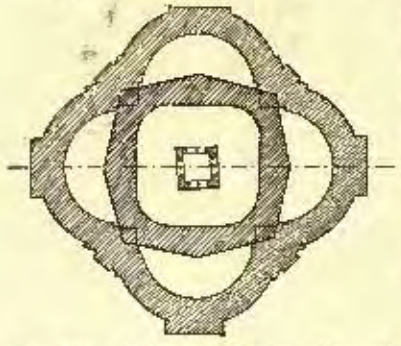


Fig. 245.—Biella. Baptistery. Plan of the two stories and turret (Xth and XIth Centuries).

THE BAPTISTERY OF THE CATHEDRAL OF BIELLA is in two stories (Fig. 245). The semicircular recesses of the lower one have domical vaults; from the upper the cupola starts. It rests on rudely formed pendentives, and from its crown rises a turret pierced with two-light openings (Fig. 246). This turret has been thought to be a later addition.[1] I lately tested the masonry, and found that this was the case. It is possible that when the primitive church of Santo Stefano was rebuilt in the first part of the XIth century (of this one campanile remains) and its bell-tower destroyed, this turret was erected to serve as a temporary belfry for the church, the bells being rung through holes pierced in the crown of the cupola. This quasi-lantern of masonry foreshadows the lanterns surmounting large domes in churches of a later date. Previously, lanterns were made of wood, as we may see from that in the abbey church of Saint Riquier (793-798).

Fig. 246.—Biella. Baptistery (Xth Century).

The roofs rest directly on the vaulting after the Roman fashion. The exterior is decorated with ranges of arched niches divided into groups by lesenas. Over the door is a lunette. The windows are very narrow and splayed on both sides. Herring-bone work is very frequent in them.

In this baptistery the pendentives of the dome are to be noticed (Fig. 247).

[1] Nella, *Antico battistero della cattedrale di Biella.*

They are not the ordinary triangular spherical pendentives of the Romano-Ravennate type, merging immediately in the dome above them or in the circumference of the drum. Rather they consist of irregular spherical surfaces of triangular or quadrangular shape built to carry pieces of vertical wall. One of the latter, the uppermost at each angle, by a gradual and irregular transformation, serves to form the transition from the square base to the circle of the cupola. Pendentives of this kind are the rude beginnings of the Campano-Lombardic compound pendentives which will be dealt with when we come to the baptistery of Galliano (1007); and they enable us to fix with sufficient approximation the date of the building.

Fig. 247.—Biella. Baptistery. Pendentive of the dome (XIth Century).

Mella[1] would put it as far back as the VIIIth or IXth century, preferably the latter. De Dartein[2] is willing to assign it definitely to the IXth. Cattaneo[3] inclines to place it in the IXth or even the Xth. I, in my turn, propose the second half of the Xth century. I am confirmed in this view by the presence of pendentives which are precursors of the Campano-Lombardic type, found in a complete though still rude form at Galliano. It appears to me incredible that, between the tentative results at Biella, and the solution of the problem at Galliano, there can have intervened more than a few years.

My date is also confirmed by the constructive idea which underlies the baptistery. I refer to the way in which the oblique thrust of the pendentives and arches against the outer walls is met by substantial external buttresses, radiating as it were from the centre. This shows that the Lombard gilds had made sure progress in the science of construction, and it foreshadows the solution of the problems of equipoise, on which the vaulted Lombardic basilica was based.

Before leaving the baptistery of Biella we may say a few words about another well-known baptistery, that of Novara; and we will try to settle the question of its date.

It consists of an octagon, with alternate rectangular and semicircular niches, apparently (the fact cannot easily be tested) of Roman construction. The interior is faced with arches springing from columns and capitals brought from other sources, which carry rough cubical pulvins. The object of these arches is to support an octagonal drum, upon which rests a dome crowned by a lantern which is a later

[1] *Op. cit.* [2] *Op. cit.* [3] *Op. cit.*

addition. The drum, which is constructed of re-used bricks, is decorated on the outside with a rude arched corbel course broken by lesenas at the angles, and finished off with a range of small niches arched in two orders.

On the one hand, the rudeness shown by the internal facing, by the pulvins, and by the way in which the transition from the octagon of the drum to the circle of the dome is managed by the adaptation of the walling; and, on the other hand, the relatively refined effect of the building compared with the baptistery at Agliate, induce me to place it in the first half of the Xth century, before the erection of the baptistery at Biella, to which it is so inferior in constructive idea.

THE CHURCH OF SS. FELICE E FORTUNATO NEAR VICENZA.—Recent operations have resulted in the disappearance of the few characteristic remains of the building erected in 985 by the bishop Rudolphus,[1] whose tenure of the see is given by Gams[2] as from 967 or 968 to 974. We, however, will adhere to the date 985, for which there is documentary evidence. These remains had survived the mutilations, transformations, and reconstructions which the church had undergone in the XIIth, XIVth, and XVIIIth centuries, and were sufficient to indicate the organic structure of the building, and also to provide specimens of its decoration. However, Cattaneo's description,[3] and my own notes and sketches made on the spot before the operations referred to were begun, enable me to give a short account of both the constructive and decorative elements.

The original building was of rectangular plan, with nave and aisles separated by columns alternating with piers. This is a feature that should be noticed, for the scheme of supports alternately large and small was, at a later date, adopted in the earliest Lombardic vaulted basilicas. The columns only supported the arches which carried the walls of the nave, whereas the piers provided in addition a starting point for the transverse arches which spanned both aisles and nave.

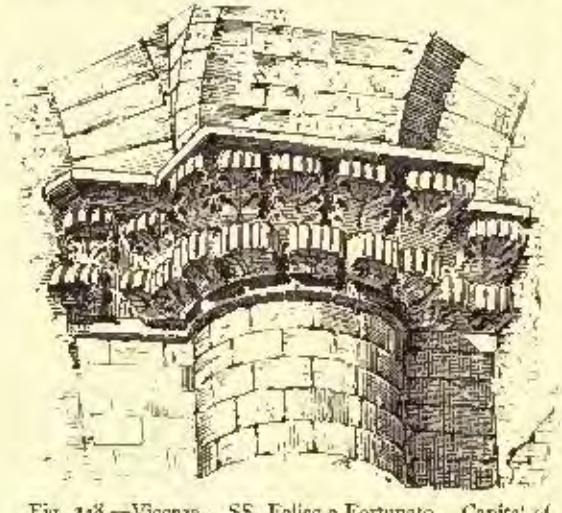


Fig. 248.—Vicenza. SS. Felice e Fortunato. Capital of the primitive church (985).

What the nature of the roof may have been it is impossible to say. But considering that San Babila at Milan, belonging to the earliest years of the XIth century, possessed cross and barrel vaults springing from piers of uniform thickness, and that it was only in the first quarter of the same century that groined vaulting began to be carried on piers alternately large and small, I do not think we shall go far wrong if we suppose that the church of Rudolphus had a wooden roof, and that the transverse arches were only intended to secure a solid and rational concatenation of the different parts of the structure, and also to make the timber roof diaphragmatic, thus simplifying its construction, and rendering less easy the spread

[1] *Grande illustrazione del Lombardo-Veneto.*—Cubiauna e Lampertico, *Vicenza e il suo territorio.*
[2] *Op. cit.* [3] *Op. cit.*

of the flames in case of fire. The same thing occurs in San Miniato al Monte near Florence (1013).

The compound piers showed a decided Lombardic character. The solitary one which survived in a mutilated form from the alterations of the XIVth century, and has now perished, had a continuous capital (Fig. 248) showing two rows of palmetto leaves unexpanded. It rested on an Attic base (Fig. 249), with Lombardic profile, composed of two rolls of the same thickness and of very nearly equal projection, with a slightly recessed scotia between them; and at the angles of the plinth below the half-columns it had strengthening spurs, rudely shaped like leaves.

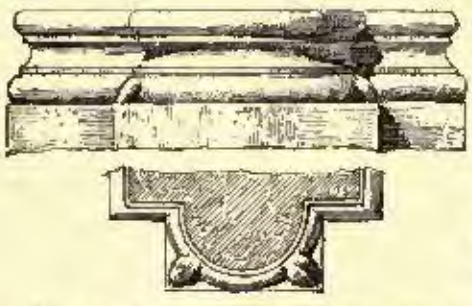


Fig. 249.—Vicenza. SS. Felice e Fortunato. Base in the primitive church (985).

This pier was noteworthy both on account of the profile of the base, and the design and proportions of the capital, the precursor of so many similar ones in the centuries succeeding the epoch of 1000; and also for the characteristic spurs ornamenting the base, which afford the earliest example of this familiar appendage of both Lombardic and Pointed architecture. Earlier instances brought forward by some writers either are non-existent, like those already mentioned on the bases of columns in Diocletian's palace at Spalato, or else they are not really such. This is the case with the spurred bases in the crypt of the cathedral at Chur, a work of the XIIth century, or, to be more precise, of the time of Bishop Bruno (1179–1180), who consecrated the church, and not of the VIIIth, as some suppose. A glance at the nine capitals surmounting the shafts above these bases, with their foliage, striations, and human heads, will convince anyone of the truth of my statement. The same is true of the similar bases in the external dome arcading of the Palatine Chapel at Aachen (796–804), which is the result of a raising of the walls of the drum carried out in the XIIIth century.

This feature, at first of very simple form, but later the subject of much elaboration, perhaps originated in an attempt to counteract the friable nature of the sandstone used.[1] It may equally well be due to the passion for novelty which at that period stirred the Lombard gilds.

The capitals of the columns were imitations of ancient types, with an infusion of Lombardic taste. For though the only one which survived the disastrous changes in the building was an imitation of the most elaborate Ionic pattern, still it was embellished with Pre-Lombardic decorative detail, and its massive abacus exhibited the interlacing which is to be seen on that member of so many Lombardic capitals of the XIth and following centuries.

This surviving capital (now in its turn destroyed) teaches us that towards the end of the Xth century there was already an idea of abandoning the rude cubical capitals of Corinthian type and Pre-Lombardic forms, which are so markedly characteristic of the VIIIth and IXth centuries, and of replacing them by others which, though more directly imitated from the old Roman models, presented decorative details which gave them a peculiar, that is to say, Lombardic character.

Further, this capital and the continuous one belonging to the compound pier tell us that, some years before the epoch of 1000, the representations of human beings,

[1] Melia, *Elementi di architettura lombarda.*

animals, and monsters, characteristic of the Lombardic style, had not yet begun to be practised by the gilds among which they originated; a fact which shows that in that age the style was still in process of formation and had not yet reached perfection.

BASILICA OF SANTO STEFANO AT VERONA.—The oldest and most remarkable portion of this building is the semicircular apse. The exterior is decorated with an arched corbel course divided by lesenas. A two-storied ambulatory encircles it within. The lower story is supported by columns and roofed by two barrel vaults on either side of a cross vault in the middle, which is a later addition pointing to a date subsequent to the epoch of 1000. Of the capitals of these columns, twelve are obviously of the same date. They are Corinthianesque, surmounted by an abacus.

The upper story (Fig. 250) is also supported by columns, and roofed with both barrel and intersecting vaults. Seven of the capitals which surmount the columns are of the same pattern as those just described.

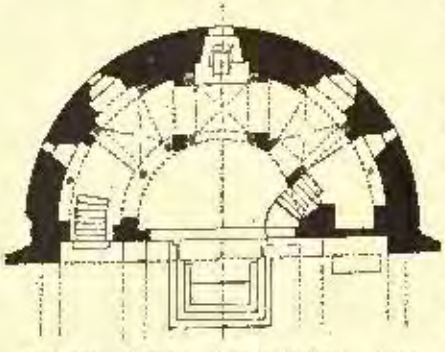


Fig. 250.—Verona. Santo Stefano. Apse. Plan of the upper ambulatory (XIth Century).

None of these capitals have a necking, and some have been mutilated in order to make them fit the shafts. They exhibit the Ravennate manner of the VIIIth century; and though they show more incorrectness in design and carelessness in execution than the capitals of the same type and age in San Salvatore at Brescia (753), San Giovanni in Fonte (about 750–760) and the original Santa Maria Matricolare (about 750–760) at Verona, still they must be regarded as contemporary with them, or nearly so, and consequently productions of the VIIIth century. To the same period and the same Ravennate artists are to be ascribed the mutilated capital here illustrated (Fig. 251), which, like the others, has been used for the upper ambulatory, and also the Corinthianesque specimens with stiff plain leaves in the crypt, which are contemporary with the nineteen of the same kind already mentioned.

In the course of a careful examination of the apse ambulatories and the staircases leading to them in Santo Stefano, I became convinced that the former were broken off when the nave was rebuilt at a later period, and that originally they were a continuation of the aisles.

And what are we to say of the date of this apse? Its limited depth, equal to its radius, following the type derived from the Roman tradition, might justify us in putting it, as some would do, before the IXth century. But this reason is superficial and deceptive. The history of the church to which it belongs does not throw any more light on the question, for all we know about this first cathedral of Verona, as it is generally believed to have been, is that it was destroyed by Theodoric (493–526), and that the last bishop buried in the rebuilt church was Biagius (about 744–750), after whom the episcopal throne was moved by Hanno to the new cathedral (about 750–760).[1] Nor is the problem elucidated by the artistic details presented by the capitals used in the apse, for they are not contemporary with it.

[1] Biscolini, *op. cit.*

We are, then, reduced to look for the required date in a decorative architectural detail, viz. the external lesenas which, being of a substantial character, point to the second half of the Xth century. An even safer guide is the vaulting of the upper story. A careful examination shows that it is of the same kind as that in the gallery of the baptistery at Galliano, erected in the early years of the XIth century. But it is ruder in character, so that we shall not go very far wrong if we regard it as belonging to nearly the same period, and constructed at the end of the Xth century.

Fig. 251.—Verona. Santo Stefano. Apse. Capital in the upper ambulatory (Xth Century).

The date of the apse of Santo Stefano, and the feature of the vaulted ambulatories encircling its interior and corresponding with the ends of the aisles, give it a place of no small importance in the history of mediaeval architecture. Indeed, though semicircular aisles or ambulatories, continuing the side aisles, were to be seen in Italy in St. John Lateran at Rome and the cathedral of Ivrea (973–1001 or 1002), two-storied semicircular ambulatories, forming a continuation of the aisles and the galleries above them, did not make their appearance before the XIth century, and Santo Stefano is the earliest specimen of such an arrangement.

And though there had been examples of galleries in other Christian basilicas of the Latin type in Italy previous to this, *e.g.* San Salvatore at Spoleto (IVth century), and at Rome San Lorenzo in Agro Verano (579–590), the Santi Quattro Coronati (625–638), and Sant' Agnese outside the walls (625–638), it is not clear that these galleries were vaulted. This was not even the case with that in Sant' Agnese which, contrary to one opinion, had only a wooden ceiling before the XVth century, when it was replaced by the existing vaulting. So that Santo Stefano may, with strong probability, boast of being the first Latin Christian church, not fitted up in a vaulted Roman basilica but built from the beginning as such, to possess vaulting for both aisles and galleries.

THE CATHEDRAL OF IVREA was rebuilt by Bishop Veremundus, as is stated in the inscription still preserved in the ambulatory: "† CONDIDIT HOC DOMINO PRAESVL WARMVNDVS AB IMO"; and also in the local Breviary (*Breviarium Proprium Eporediense*), where we read that St. Veremundus "vetustam aedem Deiparae sacram novis operibus auxit." Although we do not know precisely the year in which he became bishop of Ivrea, as the date of the death of his predecessor Eldradus is not ascertained, we may believe, on the strength of a pastoral addressed to his people on the occasion of the struggle with the Marquis Ardoin, and still preserved among the MSS. in

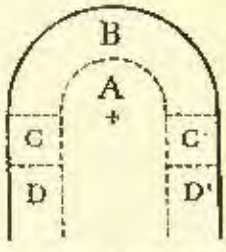


Fig. 252.—Ivrea. Duomo. Sketch plan of the apse (973–1001 or 1002).

Fig. 253.—Ivrea. Duomo. Capital in the apse (973–1001 or 1002).

the Capitular Archives at Ivrea, that his election took place about 973, in the reign of the Emperor Otto I, whose commissary and chamberlain he was in 962. His episcopate is believed to have lasted from 973 to 1001 or 1002.[1]

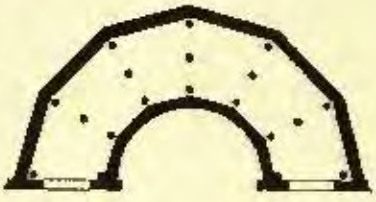


Fig. 254.—Rome. St. John Lateran. Plan of old apse (844–845).

Repeated alterations have left nothing surviving from the primitive building except the semicircular ambulatory surrounding the choir (Fig. 252), with the crypt below and the two towers; and even this is not in its original condition. The ambulatory has a barrel vault, and its arches, now walled up, formerly opened round the sanctuary. Among the antique capitals from which the arches spring is one of cubical shape (Fig. 253), designed and executed for the building. It forms a continuation of the aisles of the church, which originally, probably, also had barrel vaulting. This is the oldest existing dated instance in Italy of an ambulatory corresponding to the aisles, with the exception of the one belonging to the Lateran Basilica at Rome (Fig. 254), enlarged by Pope Sergius II (844–845), of which I made a study before it was destroyed to make room for the new choir. This arrangement reminds us of the service ambulatory, covered with a continuous barrel vault, encircling the Imperial tribune or exedra added by Septimius Severus, between the years 195 and 203,[2] to the so-called Stadium of Domitian on the Palatine at Rome. Outside Italy an early example is afforded by the crypt of St. Wipertus, near Quedlinburg (936). Some think that the church of St. Martin at Tours, erected by the bishop Perpetuus

Fig. 255.—Ivrea. Duomo (973–1001 or 1002).

[1] Savio, *Gli antichi vescovi d'Italia dalle origini al 1300.*

[2] Lanciani, *The Ruins and Excavations of Ancient Rome.*

(460–490), provided a still earlier one; but, as we shall see at the right time and place, the fact is very doubtful.

Beneath the choir is the original crypt, with the plan of a miniature basilica, ending in a semicircular ambulatory like the one above. This crypt is covered with cross vaulting in which the arches are flush with the rest of the masonry, and are supported by columns and piers surmounted by cubical capitals made for the positions which they occupy. Not a few of these capitals obviously belong to the same set as the one which we noticed in the ambulatory above ground, while others exhibit cubes decorated in various rude ways.

The original crypt was enlarged at a later date by extending it to the space below the chancel. Or that part of it may have been rebuilt, for its groined vaults with visible arches are built on a different system from that of the older part, and the capitals on which these arches rest display a more advanced stage of art.

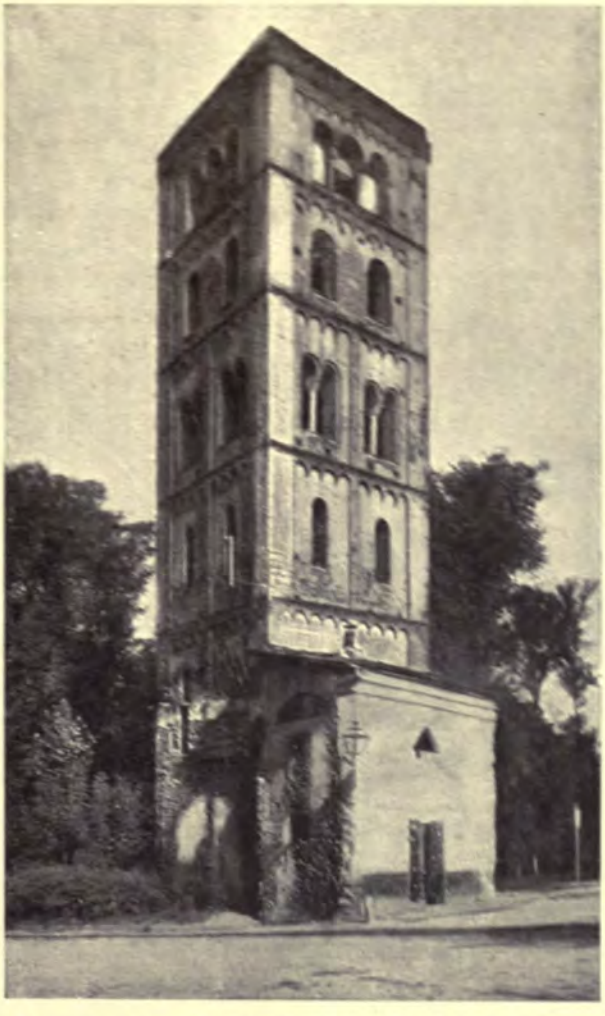


Fig. 256.—Ivrea. Campanile of the abbey church of Santo Stefano (1029–1042).

On either side of the crypt, and corresponding to the towers, open two chapels with cross vaulting, apparently (so far as one can judge from the one on the right, which is still accessible, while the door of the one to the left is blocked up), of the same date as the original crypt, as is shown by the masonry. So that we may infer that the church of Veremundus was planned with its bell-towers set at the ends of the aisles and rising over the choir ambulatory.

These imposing towers (Fig. 255) may claim to be older than the interesting campanile, of rather more elegant appearance, belonging to the destroyed abbey of Santo Stefano at Ivrea (Fig. 256), which was erected by Bishop Henry II (1029–1044) before the year 1042.[1] And they are in the same relation to all the other Lombardic towers in the adjoining Val d'Aosta, and also, perhaps, in the whole of Piedmont, where the existing tower of the destroyed abbey church of Fruttuaria (Figs. 257, 258, 259), begun in 1003 and consecrated in 1006,[2] and that belonging to the ancient

[1] [2] Savio, *op. cit.*

Fig. 257.—San Benigno. Campanile of the abbey church of Fruttuaria (1003-1006).

abbey of San Giusto at Susa, founded in 1028 or 1029[1] (Figs. 260, 261), afford striking examples of such erections. An exception, perhaps, must be made in the case of the campanile of the church at Sant' Ambrogio, at the foot of the Sanctuary of San Michele alla Chiusa, to be ascribed to the monk John of Pavia, who became archbishop of Ravenna (983-998), and afterwards retired to the Monte Pircheriano. His epitaph has actually come to light in the church at Sant' Ambrogio.[2]

Fig. 259.—San Benigno. Campanile of the abbey church of Fruttuaria. Pulvin (1003-1006).

These towers, further, contain the oldest dated specimens of those characteristic corbel pulvins, made rather elongated to correspond to the depth of the wall, and often cut flat at the sides, which, from the second half of the Xth century onwards, were selected by the Lombard gilds for their bell-towers instead of the Ravennate corbel pulvins with ordinary ovolo profile, found as far back as the VIIIth century in the guard house of Theodoric's palace at Ravenna.

Fig. 258.—San Benigno. Campanile of the abbey church of Fruttuaria. Pulvin (1003-1006).

The Lombard gilds must be regarded as having been the first to use these crutch-shaped pulvins, as they were not introduced north of the Alps before the XIth century, and did not appear in the Greek world till after the epoch of 1000, when they were employed, for the first time as I believe, in the compound windows of the

[1] Savio, *op. cit.*

[2] *Esposizione italiana*, 1898—*Arte sacra.*—Tamonelli, *La Sagra di San Michele alla Chiusa.*

Fig. 260.—Susa. Campanile of the abbey church of San Giusto (1028 or 1092).

ancient baptistery, now church, of the Holy Apostles at Athens (Fig. 262). That baptistery appears to me to have been built in the early years of the XIth century, on account of the rudeness of the supports in the three-light and two-light windows, and the external wall decoration consisting of fragments of brick arranged in different ways so as to form various patterns, interspersed with tufa blocks in the horizontal courses of the masonry, as compared with the more advanced art of the window supports and brick bands with lions, scroll work, leaves, and other ornaments in compartments to be seen in the churches of St. Nicodemus (about 1044) and St. Theodore (1049), also at Athens. Later, I believe, it was altered so as to form a church, by the addition of a nave to the west and the present cupola. The pulvins used by the Greeks before the epoch of 1000 in multiple windows, were of the Ravennate type, as may be inferred from St. Mary Panachrantos at Constantinople, supposing that in the northern small basilica the apse windows go back to the work of Lips (886–912).

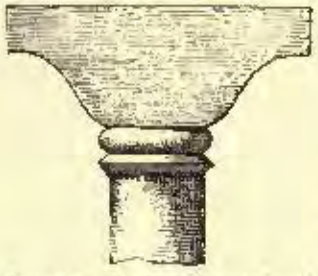


Fig. 261.—Susa. Campanile of the abbey church of San Giusto. Pulvin (1028 or 1029).

Fig. 262.—Athens. Church of the Holy Apostles (XIth Century).

Lastly, these towers are no less interesting than the ambulatory of the apse from the fact that, though altered by various restorations, and partly concealed by modern buildings, they still present the oldest known example of bell-towers set at the head of the aisles. The only exception will be if, as we shall see when we come to discuss the cathedral of Cologne, it can be shown that the experiment had been previously made in Germany. The arrangement must have been derived from the spiral staircases taken out of the angles on either side of the principal apse in various Roman structures (Figs. 263, 264). The architect of Sant' Abondio at Como (1013–1095) borrowed it soon after, without having to go to the church of Saint Germain des Prés at Paris (Fig. 265) for the idea, as has been imagined. We may be the more certain of this because the abbey church of Saint Germain, as rebuilt by Abbot Morardus († 1004), possessed only one bell-tower, probably the one on the north side, near the monks' dormitory[1];

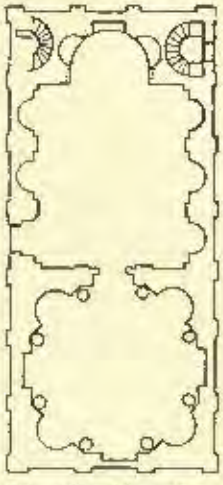


Fig. 263.—Plan of a Roman building. (*From Bramantino's sketches in the Ambrosiana.*)

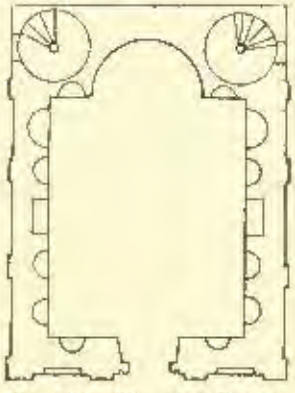


Fig. 264.—Plan of a Roman building. (*From Bramantino's sketches in the Ambrosiana.*)

[1] Bouillart, *Histoire de l'abbaye royale de Saint Germain des Prez.*

and this will be the tower mentioned by Hugh of Fleury: "turrem quoque cum signo . . . construxit."[1] In any case, the abbey church would have to yield precedence to the cathedral of Ivrea, being some years its junior.

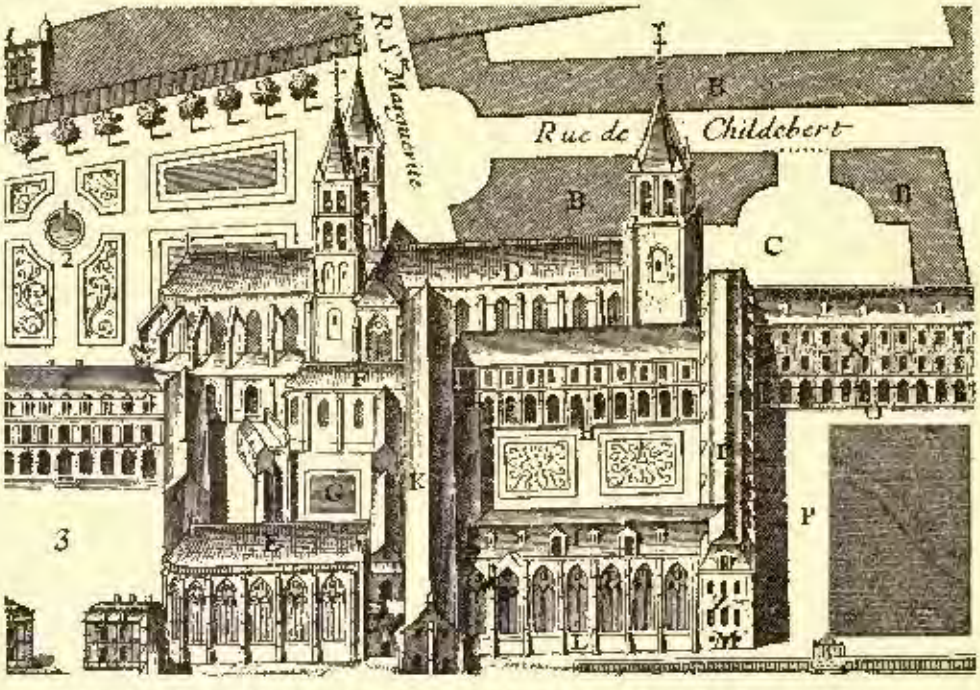


Fig. 265.—Paris. Abbey church of Saint Germain des Prés. (*From Bouillart, "Histoire de l'abbaye royale de Saint Germain des Prez."*)

THE CATHEDRAL OF AOSTA.—Aosta, which in the Xth century, in consequence of the Saracen raids, contained neither houses nor inhabitants, towards the end of the century began to rise again from its ruins and recover its population, under the protection of various powerful families, the most important of which was that of Challand. To this period, or more probably to the first years of the epoch about 1000, and after the cathedral of Ivrea was finished, or at least was on the way to completion, we may assign the founding, or rather rebuilding, of the cathedral of Aosta. Perhaps it took place in the years which followed the settlement of the Benedictines of Fruttuaria in the Val d'Aosta, which is believed to have happened in 1019,[2] and in San Giusto at Susa (1029–1042).

Fig. 266.—Aquileia. Duomo. Capital in the crypt (XIth Century).

The nave was rebuilt when the church was vaulted. The choir, though it has signs of a respectable antiquity, with cubical capitals like those in Sant' Abondio at Como, has still suffered from alterations; nor can these capitals be used as a safe guide to fix the date of the building of the choir, inasmuch as similar ones may be seen, in Upper Italy, in buildings up to the XVth century, *e.g.* in the Palazzo Madama at Turin, where they occur in the work carried out by order of Ludovico d'Acaja in 1416.

The crypt has obviously been altered. The furthest

[1] Delisle, *Recueil des historiens des Gaules et de la France—Ex fragmento chron. fratris Hugonis Floriacensis monachi.*

[2] Tibaldi, *Storia della valle d'Aosta.*

part, however, viz. that immediately under the apse, appears to be original. It has groined vaults with visible arches which spring from miscellaneous Roman capitals, with the exception of one which has been made for its place. This is a cube, bevelled at the angles, and supported by an octagonal shaft. From the workmanship one might say that it was by the same hand that carved the oldest examples in the cathedral of Ivrea. The other part, that under the spacious chancel, has capitals made expressly, as well as others of miscellaneous origin. Of the former, one recalls those in the crypt (Fig. 266) of the cathedral at Aquileia. It exhibits a range of miniature arches supported by small, fluted pillars, above which rise stiff leaves and cauliculi. The design, execution, and material of these capitals show them to be of the same date as some in the collegiate church of Sant' Orso at Aosta (1133), and this comparison enables us to fix the period of the alterations referred to above. The crypt of Sant' Orso is far from being of the Carolingian date which some have given it.[1] Bold cross vaulting of this kind was never seen in that period, and belongs to the XIIth century.

Fig. 267.—Aosta. Duomo. Campaniles (XIIth, XIVth, and XVIIth Centuries).

The towers (Fig. 267) were built at the same time as the church. The northern one was rebuilt or finished in the XVIIth century, while the one on the south side still retains the original structure in its lower part, where we find repeated the decorative motive of arched corbel courses grouped in twos by lesenas, which occurs in the lowest stage of the towers of the cathedral at Ivrea.

Their position is interesting, as they afford the oldest known example of bell-towers flanking the aisles at the east end. And lastly, the date of their erection gives them a claim to precedence over the Lombardic campaniles in which the Val d'Aosta is so rich. The oldest of these seems to be that at Pré Saint Didier, which is mentioned as early as the XIIth century.

GALLIANO. PARISH CHURCH OF SAN VINCENZO.—It was dedicated in 1007 by Aribert of Intimiano, afterwards archbishop of Milan (1018–1045).[2][3]

It consists of a nave and aisles, and ends in a round apse considerably elevated owing to the crypt beneath. It has wooden roofs, and is lighted by wide round-headed windows without splays, and loops splayed on both sides. The apse is decorated externally with blank arcading.

[1] Tibaldi, *op. cit.* [2] Poricelli, *op. cit.*

[3] Annoni, *Monumenti e fatti politici e religiosi del borgo di Cauturio e sua pieve.*

The crypt (Fig. 268) has groined vaulting with visible arches springing from four marble columns supporting Corinthianesque capitals which, though not carved with any elegance, are nevertheless designed with sure outlines, and show an undoubted vigour of execution. They recall, though belonging to a different "order," the Composite capitals in the crypt of San Miniato al Monte near Florence (1013), but are superior in boldness of execution.

Both church and crypt were originally embellished with paintings, of which only scanty but valuable remains are left.

The parish church of Galliano is interesting to us on account of the external

Fig. 268.—Galliano. Crypt of San Vincenzo (1007).

decoration of the apse. There is no earlier example of a Pre-Lombardic church with the outer face of the apse ornamented by blank arcading extending to the whole height of the wall. Another point is that it provides one of the earliest dated instances of a considerably elevated crypt.

THE BAPTISTERY OF GALLIANO.—The first erection, or at least complete rebuilding, goes back to the reconstruction of the adjoining parish church of San Vincenzo by Aribert of Intimiano, that is to say to the years immediately following the epoch of 1000, and before 1007. This is indicated by the painting formerly existing in the apse of the church, and now transferred to the Ambrosiana at Milan, in which Aribert is represented in the act of offering the church with its tower which he had rebuilt and decorated, together with the adjoining baptistery of which the porch is shown.

The plan of the interior is a square with four hemicycles projecting from it. At the angles of the square are four isolated octagonal pillars from which spring the arches which carry the gallery above and the cupola. On the outside (Fig. 269), the

recess containing the altar, and the one opposite in the front of the building, are decorated with arched corbel courses broken by lesenas.

In the thickness of the wall of the western hemicycle is constructed a narthex, beyond which is a square porch. From the latter two staircases ascend to the gallery, which extends from the square of the central tower to the outer wall of the building.

No wood is used in the structure, which is lighted by wide round-headed unsplayed windows, or else by loops with splays on one or both faces. The stone roof

Fig. 269.—Galliano. Baptistery (1007).

rests directly, in Roman fashion, on the vaulting, which consists of half-domes and rudely formed barrel and intersecting vaults.

The gallery receives its light from the inside through four pairs of openings. Just above the point where it stops, the crossing passes into the octagon from which the cupola starts, by means of four small conical or hood-shaped pendentives developed at the angles of the square where the walls are strongest (Fig. 270). Their function is to carry four of the sides of the drum (octagonal both externally and internally), thus generating the Lombardic cupola.

With reference to these pendentives, we may remark that the earliest traces of

conical angle raccords date from the age of Hadrian. Thus, in the Great Baths of Hadrian's Villa near Tivoli, built between 125 and 135,[1] the circular structure described[2] as the Calidarium is buttressed off from the Tepidarium by a small, undeveloped, hood-shaped raccord (Fig. 271). There may also be noticed on the outside of the "Piazza d'Oro," a few steps from its octagonal vestibule, the remains of an undeveloped compound pendentive (Fig. 272), which I can remember in better condition than at present; and this may have provided the model after which the Lombards, when the time came, formed their conical compound pendentive.

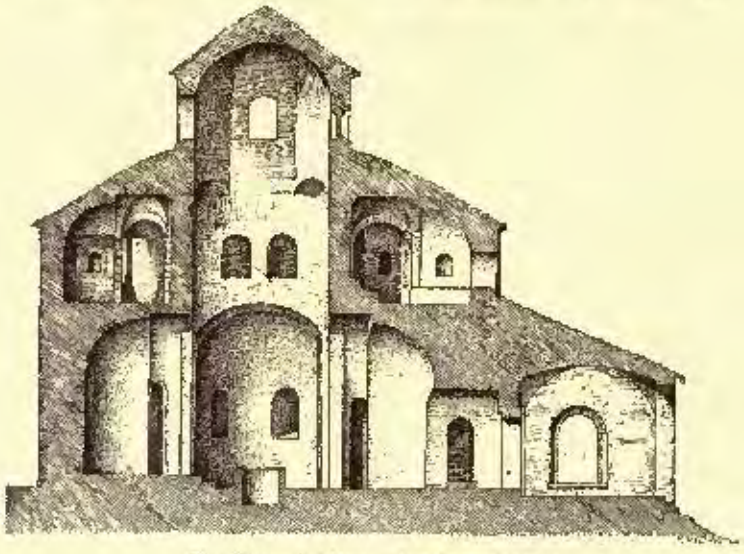


Fig. 270.—Galliano. Baptistery (1007).

The oldest specimen of a hood-shaped niche used to support a cupola is to be found in San Giovanni in Fonte or the Great Font in the cathedral at Naples (Fig. 273). It was built by Soter,[3] who, according to Gams,[4] was bishop for twenty-one years, after 465, in order to serve the ancient primatial church of Constantine, Santa Restituta, as its position shows.[5] This baptistery was followed by the one built by Bishop Vincentius (554–577)[6] for the new cathedral (known as Stephania, from Stephanus who was bishop for fifteen years, after 500), which was called the Lesser Font.

The plan of Soter's baptistery is a square, each side of which measures about 25 ft. This square, crowned by a heavy cornice, is con-

Fig. 271.—Tivoli. Villa of Hadrian. Great Baths. Hood-shaped raccord (125–135).

[1] Lanciani, Reina, e Barbieri, *La villa Adriana.*

[2] Gusman, *La villa impériale de Tibur.*

[3] *Mon. Germ. Hist.—Gesta episcoporum neapolitanorum—Appendix—Catalogus episcoporum neapolitanorum.*

[4] *Op. cit.*

[5] Bertaux, *L'art dans l'Italie méridionale.*

[6] *Mon. Germ. Hist.—Gesta episcoporum neapolitanorum.*

verted into the octagon from which the dome springs by means of four hood-shaped pendentives which span the angle spaces and carry four of the vertical walls of the low drum. I remark here that the angle niches supporting pieces of wall are a very old idea in Italy. For instance, in Hadrian's Villa, in the basement walls of the Imperial residence on the side of the valley of Tempe, the angle of the outer face is blunted, and the cross-piece which replaces it is carried on a vaulted recess formed between the two wall faces below (Fig. 274).

The East cannot show any dated example of a conical pendentive earlier than the baptistery of Soter. The most we can say is that they used a kind of small arches or niches, each forming the base of a section, and thus multiplying the sides of the polygon from which they start. This device may be seen, for instance, in the four-faced arch at Lattakia, assigned by De Vogüé[1] to the IIIrd century (Fig. 275).

It is true we are told that from very early times the Persians were acquainted

Fig. 272.—Villa of Hadrian. "Piazza d'Oro." Undeveloped compound pendentive (125–135).

Fig. 273.—Naples. San Giovanni in Fonte. Pendentive (Vth Century).

with the use of squinches for forming the transition between a square base and a dome. Dieulafoy[2] asserts that the specimens from the palaces or castles of Firuz-Abad (Fig. 276) and Sarvistan belong, the former to the reign of Xerxes I (486–465 B.C.) or of Artaxerxes I (465–425 B.C.), and the latter to the period of the last Achaemenidae, or possibly that of the Seleucidae. And he insists that the conical pendentive was the origin of the triangular one.

Perrot and Chipiez[3] have shown with plausible reasons the incorrectness of such dates, and place these buildings in the 1st century of the Christian era,

[1] *Syrie Centrale—Architecture civile et religieuse du Ier au VIIe siècle.*

[2] *L'art antique dans la Perse.*

[3] *Histoire de l'art dans l'antiquité—Perse.*

Fig. 274.—Tivoli. Villa of Hadrian. Palace. Angle raccord (125–135).

or even in the first Sassanid period. It will be enough to remark:

(1) That the triangular pendentive, the origin of which we traced in our account of the mausoleum of Galla Placidia at Ravenna, is earlier than the invention of the pendentive formed by a semicircular recess to be seen in San Vitale, and also than the hood-shaped pendentive of Soter's baptistery at Naples.

(2) The provinces of the old Persian kingdom contain no palaces earlier than the "Domus Augustana" on the Palatine at Rome, with a ground plan like that of the palace of Firuz-Abad, where the disposition of the three domed chambers in the front recalls, with the variations one would expect, that of the three rooms of the interior western façade of the Roman palace, and indicates an influence derived from the Roman conquests in Asia.

(3) Vaults of wide span, constructed of broken stones or lumps of tufa set in mortar (a method of construction which some think was originated by the Etruscans[1]), of which the dates are authenticated, were not attempted by any peoples before the Romans,[2] and are not to be found anywhere outside Italy before the days when Rome imposed on her Empire, far and wide, the architecture of the arch and the vault. Now the larger domes at Firuz-Abad cover in each case a square with sides measuring about 43 ft., while the crown is about 72 ft. above the floor, and they are constructed of broken stones roughly shaped, set in mortar.

(4) The raccords at Sarvistan and Firuz-Abad, intended to form a direct transition from the polygon to the circle, have no connection with any similar experiment made in the East before the Vth and VIth centuries. Such raccords are an imperfect reminiscence or rude application of pendentives which would come from a combina-

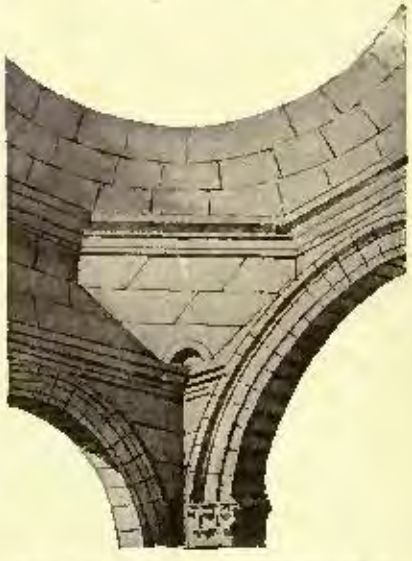


Fig. 275.—Lattakia. Angle raccord in four-faced arch (IIIrd Century).

[1] Isabelle, *op. cit.*

[2] Choisy, *L'art de bâtir chez les Romains.*

tion of those in Soter's baptistery at Naples with the others in San Vitale at Ravenna.

(5) Finally, seeing that it was under the Sassanidae (226–651) that Persia was most receptive of Western influence in matters of building, so much so that Perrot and Chipiez[1] describe Sassanid art as recalling in many of its aspects the art of Rome under the Antonines and the dynasty of Severus, the erection of the palaces of Sarvistan and Firuz-Abad may be placed, at latest, in the last years of that period, and after the completion of the baptistery of Soter and of San Vitale; possibly when the Western builders had already erected the palace of Chosroes I (531–579) at Ctesiphon, which presents the striking analogies with the one at Firuz-Abad pointed out by Dieulafoy. They had previously been assigned to the Sassanid age by Flandin and Coste,[2] while Lenoir[3] takes Firuz-Abad back to the time of Firuz (458–484), who must have given the place its name. Fergusson[4] gives the precise date of Sarvistan as about 350, and of Firuz-Abad as about 450; but on what evidence he does not tell us.

Fig. 276.—Firuz-Abad. Angle raccord in palace. (*From Dieulafoy, "L'art antique de la Perse."*)

That the conical pendentive of San Giovanni in Fonte was, after some centuries of disuse, given a new lease of life, was due to the Lombard gilds. The first efforts of the new birth are to be seen in the baptistery at Biella: we find its full accomplishment at Galliano.

There is good ground for believing that this kind of pendentive was first applied on a large scale in the cathedral of Parma, reconstructed about 1060,[5] after the fires of 1038 and 1055, by Bishop Cadalus (1046–1071), who became the Anti-pope Honorius II (1061–1064), and consecrated in 1106.[6] Later it was restored in consequence of the

[1] *Op. cit.* [2] *Voyage en Perse.* [3] *Op. cit.*
[4] *History of architecture in all countries, from the earliest times to the present day.*
[5] Allodi, *Serie cronologica dei vescovi di Parma.*
[6] Muratori, *Rerum ital. script.—Chronicon Parmense.*

Fig. 277.—Constantinople. St. Saviour Pantepoptes (XIth or XIIth Century).

earthquake of 1117 which brought down a considerable portion of the church. The simplicity of the massive restored piers of the present dome, compared with those of the nave, and also the presence of single instead of compound Lombardic pendentives, lead me to think that the dome is original up to the low drum.

The new type of cupola, which I and others call "Lombardic," from the part of Italy where it originated, was brought to perfection at a later date by being carried on hood-shaped compound pendentives. The earliest example on a large scale is still to be seen in San Michele Maggiore at Pavia (XIIth century); but there can be no question of its employment in San Lorenzo at Milan after the catastrophe of 1124, as is proved by the evidence of Bassi.[1] The Lombardic dome was elaborately decorated on its exterior, and in this form it crossed the Alps.

There is no certainly dated example of a Lombardic cupola earlier than the baptistery of Galliano. Nor can the Byzantine world show one. There, from the time of Justinian I (527–565) onwards, only the following kinds of central dome were in use.

[1] *Op. cit.*

Fig. 278.—Salonica. St. Panteleemon (XIth or XIIth Century).

(1) Polygonal externally, and internally composed of sections alternately flat and concave, as in SS. Sergius and Bacchus (about 527), and in two of the cupolas of St. Saviour Pantocrator (1118–1143), at Constantinople.

(2) Completely circular in form, or else polygonal externally and internally constructed with visible ribs, as in Isidore the Younger's dome (551–563) for St. Sophia, St. Mary Diaconissa (582–602), St. Saviour Pantepoptes (Fig. 277) erected by Anna Dalassena, mother of Alexius I Comnenus (1081–1118),[1] and in one of the cupolas of St. Saviour in the Chora, at Constantinople. The last church was rebuilt by Mary Ducaina, mother-in-law of Alexius I Comnenus, and was partly reconstructed by Theodore Metochita under Andronicus II Palaeologus (1282–1328).

Fig. 279.—Athens. St. Nicodemus (about 1044).

Fig. 280.—Athens. St. Nicodemus (about 1044).

(3) Circular both externally and internally, the interior being treated as a continuous spherical surface. This device has been followed in St. Irene (about 740) and St. Mary Panachrantos (886–912, 1282–1328), also at Constantinople, and in St. Sophia at Salonica (about 495).

(4) Circular or polygonal on the exterior, while the whole of the interior surface is divided into concave sections, as in the convent church of Myrelaion built by Romanus Lecapenus (919–945) at Constantinople, or in the manner to be seen at Salonica in the church of the Holy Apostles (XIth century).

(5) With the interior surface divided into concave sections continued through the drum below, which is thus, as it were, fluted. St. Mary Pammacaristos (1081–1118) and St. Saviour in the Chora at Constantinople are instances.

(6) Polygonal externally, with the interior treated as a continuous spherical surface, as in St. Theodore at Athens (1049), and in the churches of the Virgin (1028), St. Elias (XIth century), and St. Panteleemon (XIth or XIIth century) (Fig. 278) at Salonica.

[1] Du Cange, *Hist. Byz.—Constantinopolis christiana.*

All the preceding cupolas are supported on triangular spherical pendentives, with the exception of SS. Sergius and Bacchus at Constantinople.

(7) The last kind of Byzantine dome rests on an alternation of arches and angle recesses spanned by hood-shaped vaults, with or without triangular pendentives above them, as may be seen in St. Nicodemus at Athens (about 1044) (Figs. 279, 280), and in the convent church of Daphni near Eleusis (Figs. 281, 282), which is believed [1] to have been built before the end of the XIth century to replace the original church of the Vth or VIth.

Fig. 281.—Daphni. Convent church (XIth Century).

At this point we may make a further observation. Some have suggested that it is on the eastern side of the Adriatic that we must look for the earliest examples of the "Campanian" pendentive from which the Lombardic cupola originated, *i.e.* the hood-shaped pendentive carrying a vertical piece of wall, which the Lombard gilds made compound and applied to octagonal domes, thus producing the "Campano-Lombardic" pendentive. Dalmatia, as a matter of fact, contains buildings commonly attributed to a far earlier period than the baptistery of Galliano, in which use is made of conchiform squinches. I mention here the small churches of San Pietro Vecchio and San Lorenzo at Zara, San Nicolò and Santa Croce at Nona, and Santa Barbara at Traù. But these buildings are not as ancient as they are supposed to be, and are later in date than the baptistery of Galliano. Thus, for instance, the church of San Lorenzo at Zara, thought to belong to the VIIIth or IXth or, at latest, Xth century, is really a work of the XIth. I am supported in this view by the consideration that of the four capitals belonging to the columns which separate the nave from the aisles, the two made expressly for the church (the others being ancient and brought from elsewhere), viz. those of Corinthian type with, in one case, the figure of a saint carved on it, exhibit precisely the Lombardic manner of the XIth century. On the other hand, another church of the same type, Santa Barbara at Traù, is to be ascribed to the following century, and after 1123, in

[1] Millet, *Le monastère de Daphni*.

consequence of the destruction of the city by the Saracens: "Urbs direpta est, moenia funditus excisa, publica et privata aedificia eversa."[1]

To return to the baptistery of Galliano, everything in it is irregular, plan as well as elevation. The square of the interior is almost childishly incorrect; the four apses forming a Greek cross are not exactly opposite to one another; while instead of external buttresses corresponding to the arches of the interior, the thickness of the walls was increased at the points from which the apses start. There are the most patent inequalities in the thickness of the walls and vaulting, the span of the arches, the diameter and height of the piers, the distribution, shape, and lighting capacity of the windows, &c. On similar grounds, De Dartein,[2] though he calls attention to its very interesting artistic features, considers it as a work of great imperfection, the production of unskilled builders, mere country labourers.

Fig. 282.—Daphni. Convent church (XIth Century).

My view, on the other hand, is that, in spite of the numerous defects referred to, and although there is to be noticed a complete absence of carved ornament, the structure must be regarded as of no small value for the history of architecture. The whole has no parallel in any building either in Italy or beyond the Alps, not even Theodulf's church at Germigny des Prés (801–806). Its very complex forms, and the difficulties involved in the attempt to vault every space, suggest that its builders were not regular "magistri," while the person who designed it was a capable master mason who, apparently, wanted to experiment on a small scale (though with unsuitable materials and workmen of little skill) with a plan which was later to be carried out on a larger one; and to attain this object he sacrificed all artistic considerations.

However this may be, it tells us that, about the epoch of the year 1000, the study of scientific vaulting had made notable progress in Lombardy, and that the organic conception of the galleries and of the Lombardic cupola placed at the crossing was already formed, and only waited to be applied on a grand scale in the Italian basilicas.

THE CHURCH OF SAN BABILA AT MILAN.—There is no authentic historical record of the date of the erection of the existing building. However, we shall find that it is not difficult to fix it approximately.

It consists of a nave and aisles separated by compound piers (Fig. 283), from which spring the longitudinal arches of the nave and the transverse ones which span both nave and aisles (Fig. 284). These visible transverse arches serve, in the aisles, to support the groined vaults, concave at the crown in order to lessen the thrust, an idea which came from Ravenna, where we met with it

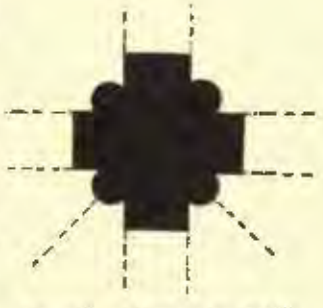


Fig. 283.—Milan. San Babila. Section of pier (XIth Century).

[1] Farlati, *op. cit.*—*Episcopi Tragurienses.* [2] *Op. cit.*

in San Vitale. In the nave they give strength to the barrel vaulting. Substantial buttresses project from the corresponding points of the exterior (Fig. 285). The transverse arches over the aisles carry arched ramping walls which bind the two sets of buttresses together.

The continuous capitals round the piers, of heavy cubical Lombardic forms, present interlacing, foliage, scroll work, cauliculi, the lamb bearing a cross, the dove, a pair of griffons drinking, and two animals biting one another's feet or tails. Where

Fig. 284.—Milan. San Babila (XIth Century).

not renewed, these carvings are in shallow relief and flat. The bases of some of the half-columns are spurred at the angles.

As the nave walls are not carried up, the nave has no windows. The aisles, on the other hand, are lighted, on the north by loops splayed on the inside, and by large windows on the south.

The front was rebuilt when the church was lengthened by a bay and the existing Lombardic cupola constructed, probably replacing a simpler one, just as happened in Sant' Ambrogio at Milan. It must have been of the same type as that of the bapistery of Galliano (1007), and, we may add, the original one in Sant' Ambrogio; and did not require piers specially built to support it, seeing that

later it was possible to raise the present cupola on the same piers. The apse, approached through a barrel-vaulted presbytery, is flanked by two cross-vaulted chapels also with apses. On the outside it is strengthened by buttresses, and decorated with a range of elongated niches, to which an arched corbel course was added as a cornice in the last restoration (Fig. 286).

In San Babila there appears for the first time the application to a Lombardic church of the ingenious plan of raising ramping walls above the transverse arches of the aisles, pierced by a passage opening, which connect together the buttresses of

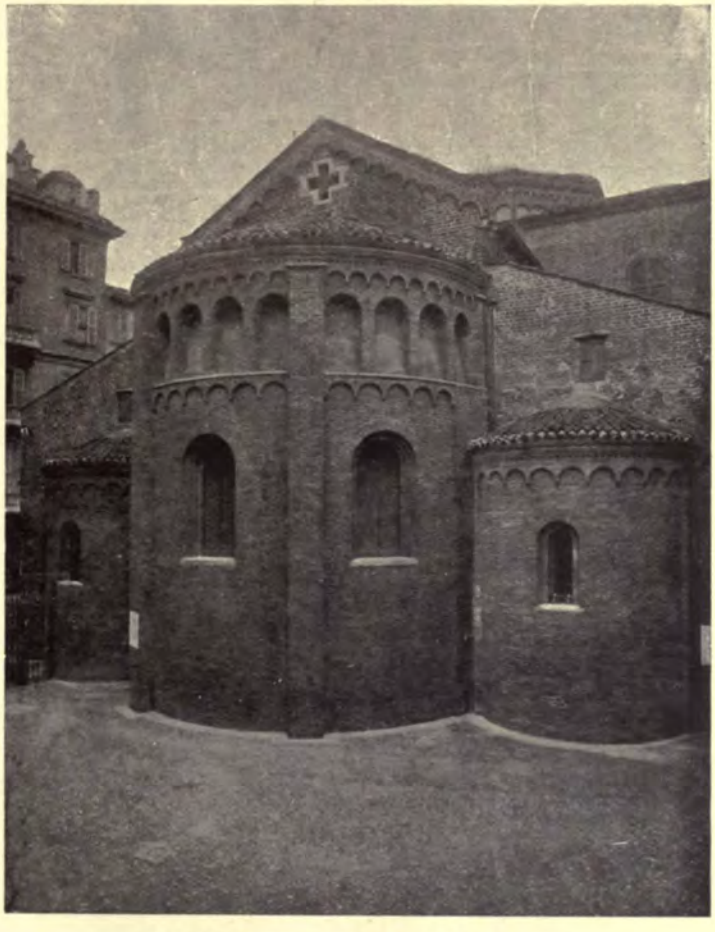


Fig. 286.—Milan. San Babila (XIth Century).

the nave and those of the aisles. The architect may have derived the suggestion from the Tepidarium of the Baths of Diocletian and Maximian (306), and also, perhaps, from the Thermae Herculeae at Milan, which must have been built by Maximian before his abdication (305).

I note at this point that, in my opinion, the architect intended to cover the nave (which is about 27 ft. wide between the piers) with cross vaulting as well as the aisles, and with this object he carried up a vaulting pier consisting of a pilaster and two engaged shafts to the spring of the vaulting, and also prepared massive buttresses on the outside to receive the thrust. Afterwards, when he was face to face with the daring project, his courage failed him, and he was content to roof his nave

Fig. 285.—Milan. San Babila. South side (XIth Century).

with cylindrical vaulting divided into sections by transverse arches. Hence, the pilaster was the only member of which any use was made, the two shafts being left without any function to perform, and the nave was deprived of windows.

In this church we may also observe the first timid appearance of animal forms in the decoration of the capitals. We shall find them fully developed in San Flaviano at Montefiascone (1032).

The date of San Babila is shown above all by the apse, which, with its bold buttresses and the character of its niches, exhibits a close relationship to that of San Celso at Milan (996). They must be almost contemporary. In the second place, it is revealed by the occurrence in it of not a few of the chief elements of the Lombardic system, which cannot be said of SS. Felice e Fortunato near Vicenza (985), so that San Babila must be later than that church. Thirdly, it is demonstrated by the fact that its aisles have groined vaults, whereas in 1032 ribbed vaulting had already crossed the Apennines to make its appearance in San Flaviano at Montefiascone. And no less so by the carvings (where original) of its piers, which show a less advanced stage of art than those in San Flaviano. In fact, there must have elapsed between them an interval which may be safely estimated at about a quarter of a century.

For all these reasons the date of San Babila may be fixed, without much chance of error, within the first decade of the XIth century, and perhaps about the time when the Lombardic cupola made its first appearance in the baptistery of Galliano.

The Basilica of San Miniato al Monte near Florence came into existence, apparently, in the early years of the Vth century. Bishop Hildebrand (1008–1024) began to rebuild it in 1013: "Ildebrandus . . . basilicam restauravit ac magnifice exornavit."[1] And it is known that by about the year 1062 it was finished.[2]

It consists of a nave and aisles (the former being

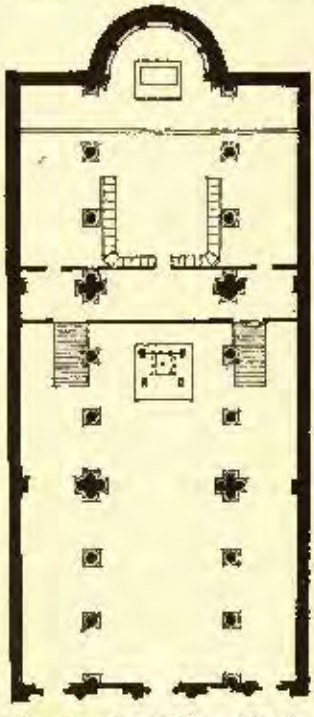


Fig. 287.—San Miniato al Monte Plan of church (1013–1062).

[1] Ughelli, *Italia sacra—Archiepiscopi Florentini.*
[2] Supino, *Gli albori dell' arte fiorentina—Architettura.*

double the width of the latter) separated by nine round arches springing from cruciform piers and isolated columns (Fig. 287). The latter only carry the nave arcades, while the compound piers furnish the supports, not only for the longitudinal arches, but also for the transverse ones which span both nave and aisles. The nave terminates in a semicircular apse. Nave and aisles alike have open timber roofs, made diaphragmatic by the transverse arches (Fig. 288).

The outer walls though tampered with in the upper part, are original, with the exception of the façade which appears to belong to three different periods, viz. the XIth, XIIth, and XIIIth centuries. Wall piers corresponding to the half-columns of the nave piers support the arches which span the aisles. The windows are narrow and double splayed. The heads of those in the apse have voussoirs alternately of tufa and brick.

Fig. 288.—San Miniato al Monte. Church (1013-1062).

Beneath the elevated presbytery opens the seven-aisled crypt, covered with groined vaults with visible vaulting arches (Fig. 289). The capitals, made for their places, which surmount the isolated columns, are in some cases Composite; and one of these, while presenting on the one side the mere outline of the ovolo, with the volutes only blocked out and plain stiff leaves, on the other has the leaves fully carved and the volutes (between which runs an egg-and-dart and bead-and-reel moulding) filled by roses executed with some care like the other ornaments (Fig. 290). This peculiarity may be due as much to the carver's wish to leave some evidence of his skill and of the different kinds of work that his chisel was capable of as to his arbitrary fancy. It is possible, too, that it may come from the instinct of imitating the antique, for similar irregularities are to be found among the buildings of the

Rome of the Empire, where we sometimes see capitals with the details left uncarved in parts which were hardly visible or quite hidden. For instance, in the Mausoleum of Santa Costanza outside the walls of Rome (IVth century) there are capitals (among the twelve of the outer circle, which are earlier than Constantine and have been brought from elsewhere) with the two rows of free acanthus leaves elaborately carved, while in others the acanthus leaves are only outlined and, as it were, enclosed in shells, waiting for the carver's chisel to do its work and set them free. This peculiarity, which was also in some cases intended by its authors to go down to future ages as a specimen of the methods of execution in vogue in their days, is illustrated by examples in various Lombardic buildings of the mediæval period, among them Sant' Ambrogio at Milan, where the south gallery contains a continuous capital showing interlacing of which some is merely outlined, some partially executed, and some completely finished (Fig. 291).

Fig. 289.—San Miniato al Monte. Crypt of the church (1013-1062).

On the other hand, the wall piers in the crypt have Pre-Lombardic cubical capitals, hollowed out at the angles (Fig. 292), and others in which the circumference of the part corresponding to the section of the column passes into the square at the top, which is crowned by a high abacus.

The basilica of San Miniato suggests some considerations from which we may derive useful information.

First and foremost, its organic structure, in spite of the retention of the form of the Roman basilica, shows, with its compound piers alternating with columns and the transverse arches which bind the whole edifice together in a rational and stable manner, an advance towards the Lombardic style, and also affords the first example

on the western side of the Apennines of an organic conception of this kind. The fact indicates that this conception, within a few years of its origin and under the powerful influence of the Lombard School, was steadily making its way in Italy, and that the Lombardic style was still in process of formation; for otherwise, in the case of so important a building, it surely would have appeared in its complete form instead of one of simple transition from Roman to Lombardic.

Fig. 290.—San Miniato al Monte. Church. Capital in the crypt (1013-1062).

In the next place, the capitals, wrought expressly to fit the isolated columns in the crypt, no longer show the Corinthianesque Pre-Lombardic forms of the VIIIth and IXth centuries which we know so well, but are imitations of the simplest type of Roman Composite. This feature is worth notice for several reasons. The first is that, as it is not met with in any other building of which the date is certain earlier than San Miniato, it follows that it is an undoubted result of the diffusion of that revival of art which not long before had made its appearance in Upper Italy.

The second reason is that, as these capitals exhibit a form more closely approximating to the classical type than that of the imitation of Ionic and Corinthian capitals wrought for the nave of SS. Felice e Fortunato at Vicenza (985) and the crypt of San Vincenzo at Galliano (1007), it may be inferred that, in spite of the influence exercised in Tuscany by the Pre-Lombardic style which was dying, and the Lombardic which was coming to the birth, in that district the traditions of Roman art had considerably more vitality than in Lombardy and the adjacent regions, where imitation of Roman types is almost exclusively limited to the Corinthian, though with variations in proportion and design.

Fig. 291.—Milan. Sant' Ambrogio. Capital in the gallery (XIIth Century).

A third reason why these capitals are important is that, if it was only in the first years of the XIth century that the artistic revival crossed the Apennines,

its diffusion through the Lombard part of Tuscany, the Duchy of Rome, and in Rome itself, must naturally have taken place at a still later period. It is on grounds such as these that I believe we ought to assign to a date not earlier than the first quarter of the century following the epoch of 1000 the capitals imitating ancient types, or Lombardesque in character, which the City of Rome has to show. It is just in that period that I place, *e.g.*, the capitals of Santa Maria in Cosmedin, imitating the simplest type of Composite, and the Ionic Lombardesque capitals of the columns flanking the entrance to the chapel of St. Zeno (Fig. 293) in Santa Prassede. Both chapel and church are the work of Pope Paschal I (817–824).[1]

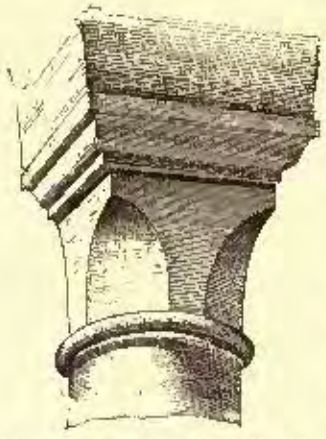


Fig. 292.—San Miniato al Monte. Church. Capital in the crypt (1013–1062).

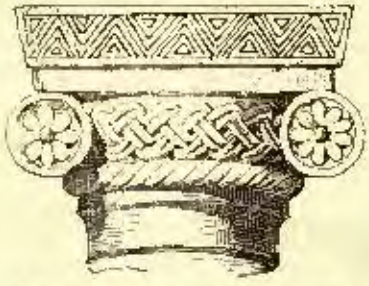


Fig. 293.—Rome. Santa Prassede. Chapel of St. Zeno. Capital (XIth Century).

THE BASILICA OF SANT' ABONDIO OUTSIDE COMO was erected above the ruins and partly upon the foundations of the primitive church of SS. Peter and Paul (Vth century). The existing church (Fig. 294) is the work of Alberic, bishop of Como (1010–1028), a fact which is proved by a diploma of 1013 issued from Pavia by Henry II of Germany (1002–1024). In 1027 the building was, apparently, still unfinished, for legacies in honour of St. Abundius were left in that year by some citizens of Milan. In 1063, again, there is record of a handsome donation made by Bishop Raynaldus (1061–1092) to Arderic the Benedictine abbot of Sant' Abondio, and this may be connected with the completion of that part of the church which was assigned to the general public. In 1095 the church was solemnly consecrated by Pope

Fig. 294.—Como. Sant' Abondio (1013–1095).

[1] Duchesne, *Le liber pontificalis*

Urban II.[1 2 3] It is possible that the ceremony did not correspond exactly with the completion of the building, which I believe was reached several years before, and that it merely coincided with the presence at Milan of Urban, who had been a Benedictine monk and a disciple of Abbot Hugh of Cluny (1049–1109), on his way to the General Council at Clermont.

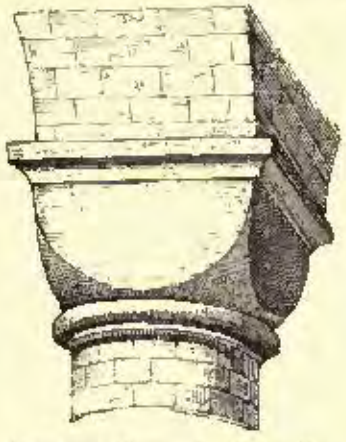


Fig. 295.—Como. Sant' Abondio. Capital in the nave (1013–1095).

The date 1013 when the rebuilding of the church began, gives Sant' Abondio a claim to precedence over all other churches in Italy and outside it with respect to the use of cubical capitals resulting from the penetration of half a sphere and a cube (Fig. 295). It has generally been described by English writers as the Cushion Capital.

No one has as yet pointed out that the cubico-spherical capital is derived from the purely decorative form of it which appeared in the IVth century, also in Lombardy, as may be seen in an important sarcophagus of that date which was unearthed at Lambrate in 1905, and is now preserved in the Castello Sforzesco at Milan (Fig. 296).

The capitals of this kind, though depressed in form, which exist in the crypt of San Marco at Venice (Fig. 297) are to be referred, not to the first church decreed by the Doge Giustiniano Partecipazio (827–829) in consequence of the bringing from Alexandria of the body of St. Mark (828), and finished by his successor Giovanni Partecipazio (829–837) in 836 when the consecration took place, nor even to the work of Pietro Orseolo I (976–978), but rather to the rebuilding of the basilica taken in hand by Domenico Contarini who was Doge, according to Sansovino,[4] from 1043 to 1070 or 1071 (in 1071 "aedes D. Marci coepta est reparari in eam formam qua nunc visitur"), and dedicated in 1094 after the finding of the body of St. Mark.[5 6 7]

Fig. 296.—Lambrate. Sarcophagus now in the Castello Sforzesco, Milan (IVth Century).

At Venice the artistic revival about the year 1000 showed itself in imitations of the antique. Evidence is to be found in Santa Eufemia alla Giudecca, which, as may be gathered from Gallicciolli,[8] was founded in 865 or 870 or 890, and rebuilt or restored in 983. In it may be noticed six Composite capitals rudely executed after Roman models, one bell-shaped Composite with wild acanthus leaves,

[1] Tatti, *De gli annali sacri della città di Como.* [2] Giulini, *op. cit.*
[3] Bollo, *Architettura del medio evo in Italia—La chiesa di Sant' Abondio e la basilica di sotto.*
[4] *Venetia, città nobilissima &c.*
[5] *Mon. Germ. Hist.—Joannis Diaconi chronicon Venetum et Gradense.*
[6] *Mon. Germ. Hist.—Annales Venetici breves.*
[7] Muratori, *Rerum ital. script.—Andreae Dandulî chronicum Venetum.*
[8] *Delle memorie venete antiche profane ed ecclesiastiche.*

Byzantine in character, and one of Corinthianesque type. The first six, by the way in which they are worked, exhibit an obvious affinity to the Corinthianesque capitals

Fig. 297.—Venice. San Marco. Crypt (XIth Century).

carrying high pulvins like truncated pyramids, in the aisles of the cathedral of San Giusto at Trieste (Fig. 298), so much so that we may believe they all came from the

Fig. 298.—Trieste. Duomo (Xth and XIVth Centuries).

same school of Venetian carvers, and belong to the same date. For the nave and aisles of the present Duomo at Trieste, though remodelled in the XIVth century

(when the cubical capitals hollowed out at the angles, and with plain leaves occupying the hollows, were introduced), must certainly be ascribed to this revival, and not to the IVth or Vth and VIth centuries.[1] I say the nave and aisles, for the small side apse, or Bishop's Chapel, with its capitals recalling those in the gallery of San Vitale at Ravenna (526–547), clearly belongs to the VIth century, or, more precisely, the time of the first bishop of Trieste, Frugiferus (about 524–568), who was the founder of his cathedral;[2] while the cupola in front of it is obviously later than the XIth century.

From the same Venetian School came the eight Corinthianesque capitals with coarse foliage sometimes treated in Byzantine fashion, in San Giovanni Decollato at Venice, founded in 1007.[3]

Fig. 299.—Rome. St. John Lateran. Campaniles (XIIth Century).

THE CHURCH OF SANTA MARIA AT SUSA was erected a short way from the church of San Giusto in the same town (1028 or 1029). It is stated[4] that it was founded in 1027 and certainly before 1029. The date is confirmed by a comparison of the masonry and the decoration of the campanile with the same features (which are original) in the contemporary church of San Giusto.

The primitive structure is, to a great extent, almost unrecognisable from the mutilation which it has suffered, the modern constructions built against its exterior, and the remodelling which the interior has undergone. All the same, the parts which are visible make it worthy of our attention.

The value of these remains is concentrated in the front of the church, which, with the surviving tall and graceful campanile of five stories marked off by saw-tooth courses, and lighted by single, two-light, and three-light openings, provides the earliest available example of a church front flanked by Lombardic bell-towers of the same date, and forming a part of it. The source of this arrangement, in the present case, must have been, not so much Sant' Apollinare in Classe, as St. John Lateran at Rome, where two bell-towers rise from the northern façade, *i.e.* the important one which faces the city (Fig. 299). The exact date of these towers is not

[1] Kandler, *Il duomo di Trieste.* [2] Gams, *op. cit.* [3] Galliccioli, *op. cit.*
[4] Prou, *Raoul Glaber, Les cinq livres de ses histoires.*

known. But we learn that the rebuilding carried out by Sergius III (904–911) in the basilica did not extend to the transept, which, like the apse, had escaped the terrible effects of the earthquake which devastated Rome in 896, and so required nothing more than restoration. Further, we know that Pope John XIII (965–972) had a bell of exceptional size hung in one of them.[1] We hear, again, that in the reign of Paschal II (1099–1118) one of them was struck by lightning, which brought down the bronze cock on the apex of the roof, as well as the bells within, and seriously damaged the whole angle of the wall of the church.[2] These injuries must have been fairly soon made good, for the bronze door of the time of Celestine III (1191–1198) in the adjoining baptistery, has engraved on it a representation of the northern façade of the basilica with its two bell-towers intact, showing two stages with two-light windows and sharply pointed roofs.

A careful examination of the masonry where visible, and of the decorative features, reveals at once two things to a practised eye. The first is, that in the course of the restoration of the XIIth century the two highest stages of the tower were rebuilt. These stages, though frequently tampered with and more or less damaged, still exhibit the evidence for their real age in the three-light openings with arched heads supported by shafts of ancient origin surmounted by rude corbel pulvins flattened at the sides—and these pulvins, it must be remembered, were not seen at Rome till the appearance of the earliest Lombardo-Roman bell-towers, *i.e.* till the second half of the XIth century. So that the date must be in the XIIth century.

The second is, that in each case the square staircase and its newel show in the quality of the masonry, among other things, very old brickwork, which must belong to a time when the stairs were only intended to give access to the ceiling and the roofs, and also other work, not so old, consisting of small blocks of peperino, which (where original and not the result of restoration) must, apparently, date from the period when the two staircase towers were raised above the transept roof and converted into campaniles, an occasion which may be connected, with considerable probability, with John XIIIth's gift of a bell to the basilica, that is to say between 965 and 972.

The scheme was afterwards reproduced by Majolus in Saint Pierre le Vieux at Cluny, which he completed in 982.

Fig. 300.—Montefiascone. San Flaviano. Inscription in the façade (1032).

THE CHURCH OF SAN FLAVIANO AT MONTEFIASCONE.—The date of its first erection is uncertain. If we are willing to trust the well-known Bull of Leo IVth (845–857) confirming to Virobono, bishop of Toscanella, jurisdiction over all places belonging to that diocese (the Bull is still preserved in the archives of Toscanella, and is published by Campanari and Turriozzi[3]), the church was already in existence in the days of that Pope, and was dedicated to the Virgin.

The present building, however, cannot boast of so remote an origin. The oldest

[1] Rasponi, *De basilica et patriarchio Lateranensi.*
[2] Rohault de Fleury, *Le Latran au moyen-âge.*
[3] *Opp. cit.*

part, that is to say the east end and the three nearest arches in the Lombardic style, only dates from the year 1032, as we are assured by the inscription (Fig. 300) built into the present front of the church, which has epigraphical peculiarities exactly corresponding to about that period. We give the first three lines, which state the year when the church was rebuilt:

Annis millenis currentibus atque tricenis
binis adiunctis ostendit pagina cunctis
hoc templum factum denuo virtutibus aptum[1]
. . . . . .

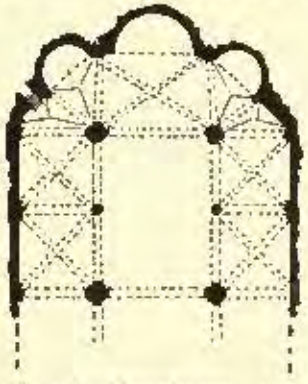


Fig. 301.—Montefiascone. Plan of San Flaviano (1032).

The two westernmost bays and the front in the Pointed style were not erected till the beginning of the XIVth century, when, on the occasion of the works referred to in the Vatican Regesta Nos. 50 and 51, the church was restored and lengthened by about 20 ft.

Our attention must be devoted to the XIth century church, which has a special interest for our subject. Its plan is externally a rectangle, while the interior takes the form of a polygon with almost every side unequal. Three of them have apses radiating from the centre (Fig. 301), the smaller ones being taken out of the thickness of the wall, while the larger one starts directly from the end wall of the nave. The outer walls have been rebuilt at the top.

In the interior (Fig. 302), the central space, of irregular form from floor to roof, is surrounded by an aisle with a gallery above it, communicating with one another by two staircases taken out of the thickness of the walls, only that on the left being original. The aisle, on the north side of which is an original very narrow window filled with a *transenna* of interlacing circles, is formed by four massive piers with a column midway between them on either side, thus producing two bays. Corresponding to these piers are wall piers strengthened externally by buttresses of triangular shape. The bays, which form irregular squares, have raised cross vaulting with diagonal ribs of rectangular section, about 10 inches across at the base (Fig. 303). These ribs of stone, like all the others, starting from triangular springers developed between the longitudinal and transverse arches, are nearly semicircular, and are constructed quite independently of the cells. They served as centring when the latter were made.

Fig. 302.—Montefiascone. San Flaviano (1032).

[1] De Angelis, *Comentario storico-critico su l'origine e le vicende della città e chiesa cattedrale di Montefiascone*.

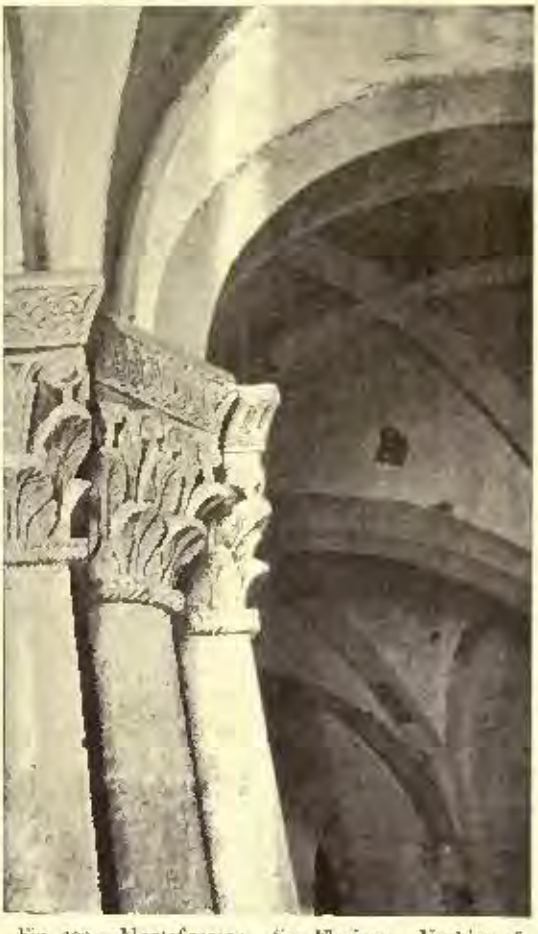


Fig. 303.—Montefiascone. San Flaviano. Vaulting of aisle (1032).

The compartments of the vaulting, which geometrically form parts of a cylinder and were originally plastered over, were constructed by first placing a rough wooden centring on the ribs; next, by modelling up the surface in earth or in clay and water to receive them, and then arranging upon this layer lumps of tufa of various sizes, one next the other, set in mortar, after the Roman fashion, thus producing a kind of coating intended to make the centring firmer. Above this came the backing of rubble concrete.

The aisle extends round the sanctuary, forming a sort of ambulatory, with ribbed vaults tripartite in the four bays at the sides, and quadripartite in the middle one. In one of the bays the ribs are not of rectangular section, but rudely moulded like a torus.

The compound piers have continuous cubical capitals carved with foliage, scroll work, cauliculi, interlacing, knots, flowers, creatures of real or fanciful character (Figs. 304, 305). In these capitals, as well as in those belonging to the columns (Fig. 306) and half-columns (carved in high relief with, in places, deep shadows produced by the use of the drill, or completely undercut), the foliage is in some cases treated

Fig. 306.—Montefiascone. San Flaviano. Capital (1032).

Fig. 305.—Montefiascone. San Flaviano. Capital (1032).

Fig. 304.—Montefiascone. San Flaviano. Capital (1032).

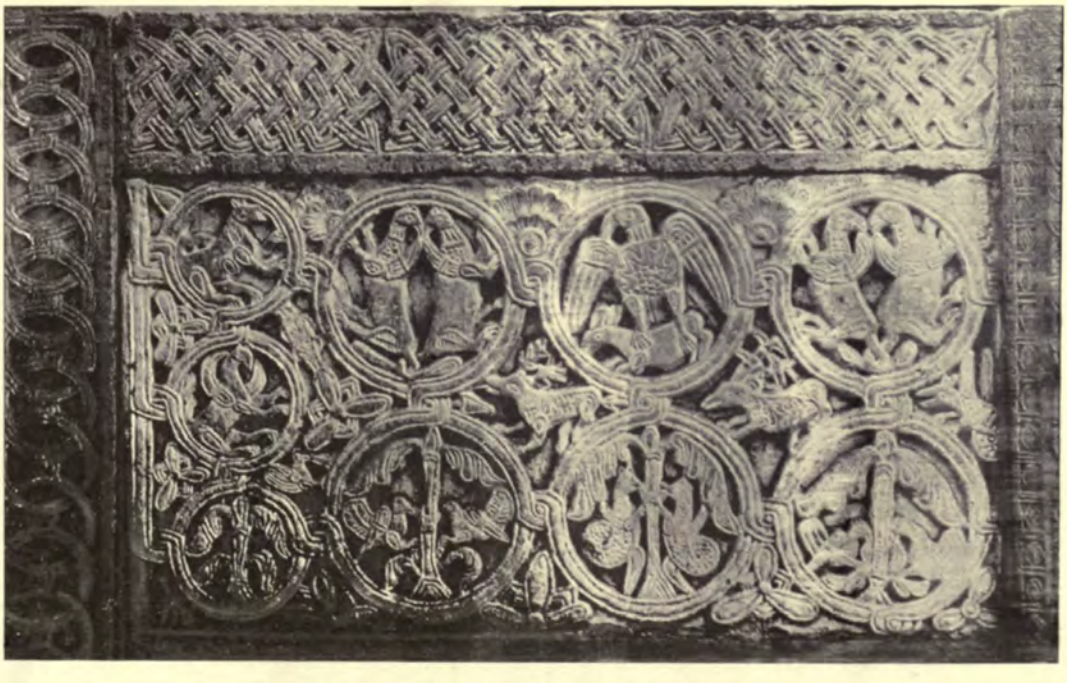


Fig. 307.—Aquileia. Pluteus in the Duomo (XIth Century).

with freedom, in others very coarsely. The animal figures, too, devoid as they are of proportion and anatomy, show unequal treatment, with the exception of the birds, which are marked by correct design and careful execution.

Fig. 308.—Bari. San Nicola. Capital (1087–1098–1105).

Anyone who cares to follow my example and to compare, not once but several times and with the examples before the eye, the capitals of San Flaviano with those that precede them in

Fig. 310.—Montefiascone. San Flaviano. Lion from the original portal (1032).

San Babila and those that follow them, of the same kind, in the ambulatory of the cathedral at Aversa, in Santa Maria e San Sigismondo at Rivolta d'Adda, and in Sant' Ambrogio at Milan (the date in every case being nowadays ascertained), will find in them, allowance being made for differences of material, the history of the gradual and progressive development of Lombardic carving in the XIth century.

Fig. 309.—Montefiascone. San Flaviano. Gallery (1032).

Next, if we put the carvings in San Flaviano side by side with the nearly contemporary work on the capitals and *plutei* (Fig. 307) in the cathedral at Aquileia belonging to the time of the patriarch Poppo (1017 or 1019-1042 or 1045), and also

with that on the original capitals (Fig. 308) in San Nicola at Bari (1087–1098–1105), we are struck by a general superiority of the XIth century carvings of Lombardic design and workmanship over the contemporary productions of Venetian or Apulian chisels in the Lombardo-Venetian or Lombardo-Apulian styles.

Fig. 311.—Corneto Tarquinia. Museo Bruschi. Part of Etruscan amphora.

So much of the gallery (Fig. 309) as is original has on either side an arcade with columns carrying the lofty walls which support the modern wooden roof with its two unbroken slopes covering the whole building. One of the bases has the plinth protected at the corners by spurs carved in the form of heads. The capitals are hollowed out at the angles, each of which is filled by a coarsely carved leaf. There is one exception, a rather singular one: a capital cut into polygonal faces. Remains of one of the old windows, now blocked up, may be traced on the exterior of the south side of the church.

From the original west front two valuable fragments survive, both of a decorative character. One is a panel carved with a Siren holding up the two ends of her tail. The other is a small lion (Fig. 310) of very archaic form, barbarous both in design and execution, holding between its paws the remains of another animal. One side and the hind-quarters are left rough, which means that it must have been set against one side of the portal and have supported some sort of shaft belonging to it.

Fig. 312.—Corneto Tarquinia. Museum. Etruscan sarcophagus.

There are four noticeable features in San Flaviano to which we will call attention. The first holds a very important place in the genesis and development of the Lombardic vaulted basilica.

I. The raised cross vaulting with visible ribs of dressed stone: the earliest of certain date that I can point to.

II. The Lombardic continuous capitals: not a new form, for we have already noticed them in San Babila at Milan. There, however, animal representations barely make an appearance, whereas in San Flaviano they are fully developed, and no longer fettered by early Christian

symbolism in the manner still to be seen in San Babila, but transcend the limitations which restricted representations of living nature in Western religious carving

Fig. 313.—Cerveteri. Representation in an Etruscan tomb.

Fig. 314.—Constantinople. St. Saviour Pantocrator (1118–1143).

during the VIIIth, IXth, and Xth centuries. Such representations were partly a legacy from Roman and Etruscan art (Figs. 311, 312, 313), particularly the latter,

which has not yet been studied as it deserves to be in its relations with the genesis of mediæval art. Partly, too, they were due to the imagination of the carvers. Their intention, to my mind, was rather decorative than symbolical. It was not till about the epoch of 1000 that they were used to ornament capitals in churches, either in Italy or outside it. Nor do they appear in Byzantine churches; for, in the period preceding or immediately following the invention of the Lombardic capital, the time-honoured fashions of the East were maintained in those countries, with rare exceptions in which traces of Lombardic influence are sometimes apparent (Figs. 314, 315, 316, 317).

Fig. 315.—Salonica. Church of the Holy Apostles. Capital (XIth Century).

And if we occasionally find decorative motives inspired by those of Byzantine cubical capitals of the Vth and VIth centuries, as for instance at San Flaviano in the two capitals nearest the presbytery, still they are conceived and carried out in a way that is quite new and original, so that they acquire a character of their own, which is neither more nor less than the typical Lombardic character, specimens of which cannot be found earlier than the last years of the Xth century.

III. The small lion forming part of the decoration of the original doorway, which must have had a portal of the Lombardic type. In fact, the church of Sant' Andrea,

Fig. 316.—Athens. Church of Kapnikaraea. Capital (914–922).

Fig. 317.—Salonica. Church of the Virgin. Capital (1028).

also at Montefiascone (which I was the first to notice), and contemporary with San Flaviano as the carving of its capitals shows, still preserves its doorway which, though tampered with, retains its original features, being those of a Lombardic portal in its

Fig. 318.—Rome. San Lorenzo in Agro Verano. Lion at the entrance (1216–1227).

earliest stage of development, opening between two orders of jamb shafts from which springs a stout roll decorated with carving.

It is the forerunner of the lions, griffons, and other creatures, and also of the crouching telamons which, at a later period, were used to support the monsters which flank the doorways, and the Lombardic porches of churches. Notable examples of such "stylophorous" creatures are to be seen in Rome at the doors of San Lorenzo in Agro Verano (Fig. 318) of the time of Honorius III (1216–1227), and of SS. Giovanni e Paolo (XIIth or XIIIth century)[1] (Fig. 319). North of the Apennines, even more remarkable specimens are provided, to give only two instances, by the principal entrances of the cathedrals of Ancona and Parma, where they belong to the XIIIth century.

The conception of animals either stylophorous or warders of a door was of Eastern origin (Fig. 320). The architects of Syria and Chaldaea employed such, of either realistic or fanciful character, in quite early times. But we must not forget that, in Italy too, the Etruscans used to set lions and sphinxes to guard the entrances of tombs, or to form acroteria; and that the crouching lions of the Lombardic portals often copy the pose, archaic expression, and hook-shaped locks of the manes of their Etruscan prototypes, *e.g.* the two belonging to the German Institute at Rome, which came from a tomb at Vulci ascribed to the VIth century (Figs. 321, 322). And this is not all, for these Lombardic creatures again suggest Etruscan inspiration when they hold between their paws, with either a protective or destructive intention, the forms or the remains of human beings and animals. For

Fig. 319.—Rome. SS. Giovanni e Paolo. Lion at the entrance (XIIth or XIIIth Century).

[1] P. Germano di S. Stanislao, *La casa Celimontana dei SS. martiri Giovanni e Paolo.*

Fig. 320.—Constantinople. Imperial Museum. Stylophorous sphinxes from Sindjrli.

Fig. 321.—Rome. German Institute. Etruscan lion from Vulci (VIth Century B.C.).

Fig. 322.—Rome. German Institute. Etruscan lion from Vulci (VIth Century B.C.).

Fig. 323.—Florence. Archaeological Museum. Etruscan lion from Vulci (VIth Century B.C.).

Fig. 324.—Colchester. Sphinx in the Museum. (*From a photograph provided for me by the Curator.*)

instance, a stone lion from the necropolis of Vulci (generally ascribed to the VIth century B.C.), now in the Archaeological Museum at Florence, rests its right fore paw on a human head with closed eyes (Fig. 323).

With reference to this last sepulchral representation, I would remark that it survived in Italy up to Imperial times. For instance, there is a sepulchral altar carved with a sphinx holding a bull's head between its fore paws.[1] It also crossed the Alps, and appeared in Britain in the Roman period. In the Museum at Colchester is preserved a winged sphinx of stone, with a human head between its fore legs (Fig. 324). It is supposed to have adorned the gate of the necropolis of Roman Camulodunum; but it is more likely that it may have guarded the entrance to a tomb erected during the Roman conquest for some important personage from Etruria. As a final illustration I may call attention to a coin of Teos showing a griffon with its left fore paw on a human head.[2]

Lastly, we may notice that the Lombardic porch with columns resting on the backs of animals, realistic or imaginary, and on telamons, was modelled on the Roman type of projecting porch, like the one belonging to the Constantinian St. Peter's at Rome. This is a fact which has hitherto failed to attract attention. Against the further side of the cloistered atrium of that famous church was built a projecting porch, exactly opposite to the central door, the "silver door" or "porta regia maior."[3] This porch is represented in the plan of Alfarano (1590), who tells us that it belonged to the age of Constantine, and had a very ancient bronze roof supported by two porphyry columns, which protected a marble statue of St. Peter.[4] A drawing of the façade of St. Peter's left by Grimaldi[5] shows the porch with the statue referred to. It may also be seen in other views, *e.g.* the one reproduced here (Fig. 325) from a print in the Uffizi.

Fig. 325.—Rome. Façade of the Old St. Peter's. (*From a print in the Uffizi.*)

If Cattaneo[6] had taken to heart the kindly advice of De Rossi[7]—"It is not necessary to go on pilgrimage with De Vogüé to the Syrian desert in order to make new discoveries in the history of Christian architecture"—and had looked for them at home, he would have saved himself his travels to those distant lands (though they were only on paper) in

[1] *Altmann, Die römischen Grabaltäre der Kaiserzeit—Grabaltar der Cornelia Cleopatra.*
[2] Milani, *Studi e materiali d'archeologia e numismatica*, 1904. [3] Duchesne, *Le liber pontificalis.*
[4] *Alme urbis divi Petri veteris novi templi descriptio—Archivio capitolare di San Pietro al Vaticano.*
[5] *Volumen diagrammatum veteris Vaticanae basilicae—Archivio capitolare di San Pietro al Vaticano.*
[6] *Op. cit.*
[7] *Bull. d'arch. cristiana*, 1871—*Spicilegio d'archeologia cristiana nell' Umbria—Della basilica di San Salvatore presso Spoleto.*

search of VIth century prototypes of porches with stone or wooden roofs. And he would have realised that when Leo III, bishop of Nola (about 700), wanted to erect the porch of the chapel of the Martyrs at Cimitile near his cathedral city, there was no need for him to go to Eastern architects for the model. Certainly no Eastern artist had a hand in the execution of its carving, as is proved by the Corinthianesque capitals of a type not in vogue at that period in the East, and undoubtedly the work of Campanian chisels.

The Lombardic porch was sometimes surmounted by a niche or canopy, or else by a loggia, the latter being an adjunct of Ravennate origin, as we noticed in our description of the guard-house of Theodoric's palace at Ravenna (VIIIth century). In other cases it was constructed with two tiers of columns, one above the other.

Fig. 326.—Modena. Duomo. Porta de' Principi (XIth Century).

I have discovered the prototype of the Lombardic porch in the cathedral of Modena (1099–1106); and, accordingly, it is to the architect Lanfrancus, and his collaborators the master masons Wiligelmus or William and Nicholas, that the honour of its creation is due (Fig. 326).

IV. The column base with spurs strengthening the lower torus of the plinth. These adjuncts, which hitherto have appeared only under the form of claws (*e.g.* in SS. Felice e Fortunato, Vicenza, and San Babila at Milan), here assume a new shape, viz. that of living creatures.

San Flaviano, which, in spite of all that can be said to the contrary,[1] is an important landmark in the history of Lombardic architecture, teaches us that at the beginning of the second quarter of the XIth century, the Lombardic organism with its raised cross vaults and longitudinal, transverse, and diagonal visible arches; with its compound piers prepared to support them, surmounted by characteristic heavy Lombardic cubical capitals, and resting on not less characteristic spurred bases; with its external buttresses corresponding to the internal transverse arches; and with its galleries, no longer intended to reproduce an Oriental Christian usage, or rather one

[1] Mothes, *Die Baukunst des Mittelalters in Italien.*

derived from Pagan Rome, but designed to counterbalance the pressure of the vaulting;—it teaches us, I say, that this organism had not only been created, but had even crossed the Apennines. And this fact enables us to place its first appearance, with some show of reason, at the close of the first quarter of the XIth century.

THE CATHEDRAL OF AVERSA was built after the Norman count Rainulf (1030-1047) had founded the city (1030),[1] and when the episcopal see was instituted for its first bishop, Azolino (about 1049-1056).[2] Its founder was Richard I, proclaimed Prince of Capua in 1062. His son, Giordano I (1078), completed the building as stated by the inscription over an original door of the church at the northern end of the transept. It was damaged when, in 1134 or 1135, Roger I, King of Sicily, set fire to the city, but was restored. Traces of both fire and restoration are to be seen in the central tower, which has been a good deal altered. Further restorations were made necessary by the earthquakes of the XIVth, XVth, and XVIIth centuries, those of the year 1349 involving extensive rebuilding. In the XVIIth century it was reduced to its present condition.

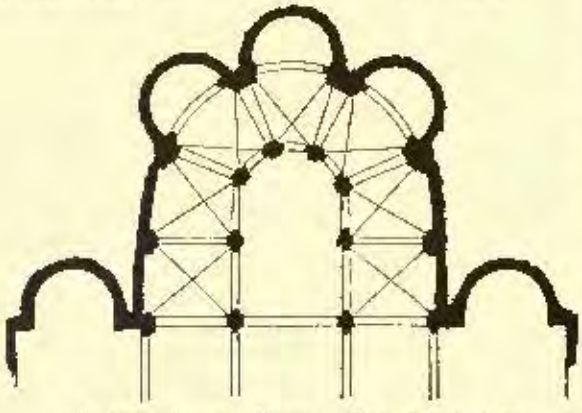


Fig. 327.—Aversa. Duomo. Plan of choir (about 1049-1078).

Of the original structure there remains the spacious choir with an arcaded ambulatory from which project three radiating chapels vaulted with half-domes (Fig. 327). The arcade, now blocked up, has compound piers supporting round arches. From these piers and from the wall piers spring massive transverse arches and powerful ribs of rectangular section, about 1 ft. 8 in. across at the base, built to carry the heavy vault cells of the uncouth but impressive ambulatory (Fig. 328).

Fig. 328.—Aversa. Duomo. Ambulatory (about 1049-1078).

This vaulting was constructed in the same way as that in San Flaviano at Montefiascone; and like that its surface was plastered. That it is markedly raised, comes from the varying diameter of the arches, and also from the fact that the diagonal ribs are nearly semicircular. There may be noticed an

[1] Parente, *Aversa (chiesa vescovile)—Enciclopedia dell' ecclesiastico*, anno 1845. [2] Gams, *op. cit.*

improvement in construction over the vaulting in San Flaviano: the ribs rest undiminished on shafts made to receive them, instead of being compressed at the end (after the Roman manner) in order to find their way between the arches to their support on the wall or nave piers.

The capitals, whether cubical or Corinthianesque, of the piers have representations of living beings, which are rather rude, but display an art somewhat more advanced than that to be seen on a capital (now used for holy water) in the abbey church of the Trinità at Venosa (Fig. 329), founded by Count Drogo between 1046 and 1051, and consecrated in 1059 by Pope Nicholas II (1059–1061). Not so the foliage, which, though somewhat clumsy in design, is carved with a sure hand, and is superior to that in San Flaviano at Montefiascone.

Fig. 329.—Venosa. Capital in the church of the Trinità (1046–1059).

The choir of the cathedral of Aversa, of one and the same date in all its parts, is of great importance, both for the history of Lombardic architecture, and for the origin of the Pointed style, inasmuch as it was the first to exhibit an ambulatory with ribbed vaulting which a minute examination shows to be original. It has, indeed, been stated that the vaulting cannot have formed part of the original structure,[1] and is the result of alterations and additions,[2] for the curious reason that ribbed vaulting had not then been attempted in France, even in this rude form, forgetting that cross vaulting with diagonal ribs had made its appearance in San Flaviano at Montefiascone as early as 1032. And that date is beyond dispute, being officially stated, quite apart from the evidence of the building itself, by the original inscription of the XIth century which I have reproduced above.

THE CHURCH OF SANTA MARIA E SAN SIGISMONDO AT RIVOLTA D'ADDA was erected by the people of Rivolta, and was given with all its possessions to Pope Urban II by the regular canons, in exchange for special privileges, afterwards confirmed by the successive pontiffs, Paschal II (1099–1118), Calixtus II (1119–1124), Innocent II (1130–1143), and Celestine II (1143–1144), as is stated in a Bull of Lucius II (1144–1145), dated 1144.[3][4] It must, then, have been built in the years when Urban II filled the chair of St. Peter (1088–1099), and probably before 1095, that is to say before the erection of San Giacomo at Como, the church of Rivolta being designed with an apse which has no external open gallery. It may even have been begun in the pontificate of Victor III (1086–1088).

What is certain is that it must have been completed ("propriis sumptibus a vestris civibus aedificata") before 1099 if it was possible to hand it over, already built and consecrated, to Urban II. The recent removal of the later accretions which veiled the structure has restored the primitive appearance of the church.

It consists of a nave and aisles (Fig. 330). The former, about 32 ft. wide between the bases of the piers, is of three square bays, two of which have ribbed vaults decidedly raised, while the third has a barrel vault sustained midway by an

[1] Bertaux, *op. cit.*
[2] Schultz, *Denkmäler der Kunst des Mittelalters in Unteritalien.*
[3] Vignati, *Vita di S. Alberto Quadrelli—Documenti storici su S. Alberto Quadrelli vescovo di Lodi.*
[4] Biscaro, *I documenti intorno alla chiesa di San Sigismondo di Rivolta d'Adda.*

arch. Each aisle has six square bays with ordinary intersecting vaulting, but raised. San Babila had clearly produced a school of imitators.

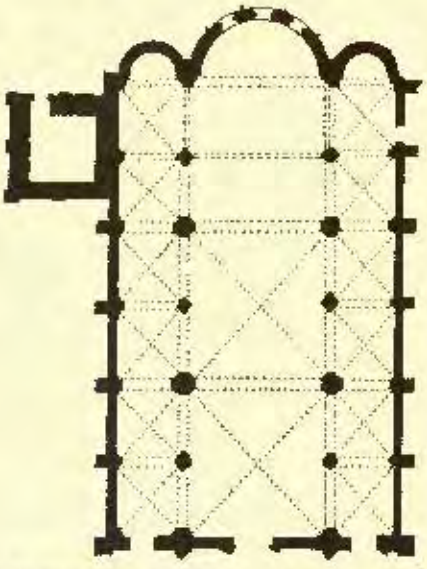


Fig. 330.—Rivolta d'Adda. Plan of church of Santa Maria e San Sigismondo (XIth Century).

The two cross-vaulted bays of the nave (Fig. 331), with massive rectangular stone ribs, describing almost a semicircle, but slightly pointed at the summit (where they measure about 1 ft. 8 in. across), are concave-crowned. They are constructed, so far as the cells are concerned, in the same way as those of San Flaviano at Montefiascone, only with a difference in the material which here consists, in the case of the stratum laid upon the wooden centring kept up by the vaulting ribs, of broken bricks, stones, and pebbles, sometimes arranged in herring-bone fashion. In this vaulting, though the ribs are pointed, they are not sufficiently so to show an application of the principle of the pointed arch.

The piers are alternately larger and smaller. The former are in section like those of San Babila at Milan (XIth century), *i.e.* cruciform with engaged shafts in the re-entrant angles (Fig. 332). The latter have a section identical with those of the church of Montalino at Stradella (Fig. 333), viz. quadrangular piers with a half column on each face. The continuous cubical capitals belonging to these piers and the corresponding wall piers (partly renewed or retouched, though keeping

Fig. 331.—Rivolta d'Adda. Church of Santa Maria e San Sigismondo (XIth Century).

the original design and execution) are ornamented with scroll work, foliage, caulicoli, and living creatures of real or fanciful origin, which, on the whole, show very little difference in modelling and execution from those in Sant' Ambrogio at Milan. In fact, it might almost be said that the best had come from the same hand as the latter. The bases have at the corners of the plinth strengthening spurs, in some cases carved as human heads.

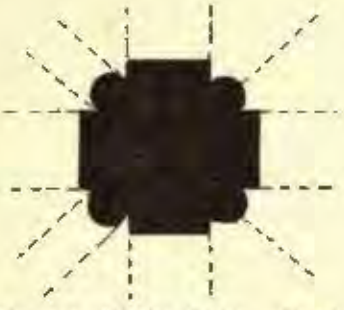


Fig. 332.—Rivolta d'Adda. Church of Santa Maria e San Sigismondo. Section of one of the large piers (XIIth Century).

Fig. 333.—Stradella. Church of Montalino. Section of pier (XIth Century).

With one exception, the lunette produced by the junction of the lateral cell with the side wall is pierced by two windows larger than those in the aisles. A similar arrangement may be seen in an ancient Roman building the design of which has been preserved by Serlio.[1] We learn from a Vatican MS.[2] that it formerly existed on the Via Appia (Fig. 334). In the facing of the walls the use of "opus spicatum" is raised to the level of a real system of construction.

Answering to the transverse arches in the aisles are substantial buttresses, as in San Babila at Milan, connected by ramping ones with the similar series that meet the thrust of the transverse arches of the nave (Fig. 335). The open arcaded gallery round the exterior of the apse is the result of alterations which also affected the front of the church, apparently in the XIIth century.

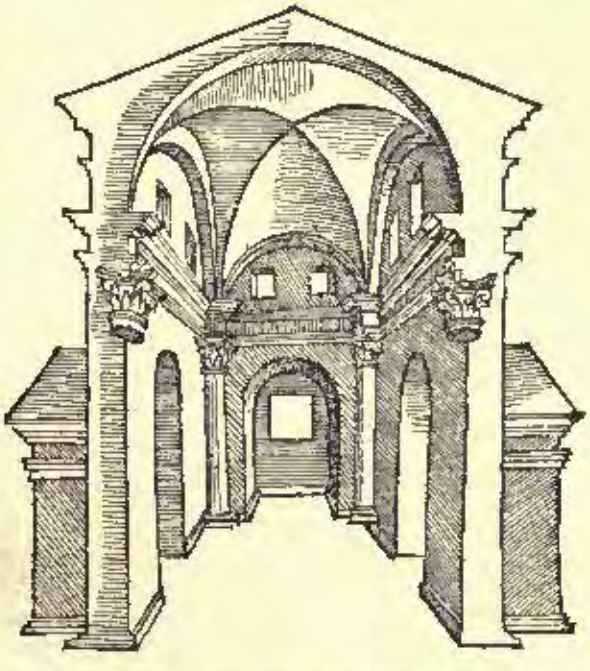


Fig. 334.—Rome. Tomb on the Via Appia. (*From Serlio, "De le antiquità."*)

If it possessed a *matroneum* or triforium gallery, the church of Rivolta d'Adda would exhibit the complete Lombardic organism. Everything points to its having been built before Sant' Ambrogio at Milan, but only just before. The similarity of the salient features in the two structures is obvious. The carvings at Rivolta not only reproduce the same decorative elements—among them the new one of animals rampant—but even suggest the hands and the characteristics of the gild which worked in Sant' Ambrogio. The artistic advance sometimes noticeable in the capitals of the latter can easily be explained by the greater experience gained by the carvers. In the secondary piers there is just the same arrangement of a half-

[1] *Op. cit.*

[2] Vatican Library. Cod. Lat. 3439.

column attached to the face in order to resist the thrust of the transverse arch in the aisle. In Sant' Ambrogio it also carries the shaft supporting the arched corbel course below the gallery, whereas here it has no such function to perform as there is no gallery to decorate.

Again, the ribbed vaulting of the nave in the two churches is closely related. In either case it covers a square bay corresponding to two bays of the same form in each aisle. Both transverse and longitudinal arches are semicircular. In Sant' Ambrogio the latter are constructed, like the ribs, of brick with bands of stone at intervals. The diagonal ribs are alike in section, and slightly pointed. This strong supporting framework is, in both churches, quite independent of the masonry of the cells which rest upon it. The latter, in the case of Sant' Ambrogio, are made of brick, with a maximum thickness of about 1 ft. 8 in. at the summit.

The somewhat rude construction of the vaulting at Rivolta d'Adda compared with that in Sant' Ambrogio is to be explained by the old material which was used

Fig. 335.—Rivolta d'Adda. Church of Santa Maria e San Sigismondo. South side (XIth Century).

up in it, rather than by any great lack of skill in the builders. Between San Flaviano at Montefiascone and the church of Rivolta there elapsed an interval long enough for the evolution of ribbed cross vaulting from its elementary form to the complete system of ribs sustaining cells of brickwork to be seen at Sant' Ambrogio, and for its application to the church of Rivolta, though in a less advanced form so far as the cells are concerned. The intersecting vaults of the aisles in both cases are raised. The hood moulding of the main door is a roll springing from two attached shafts. The lateral doors have plain jambs, and above them are very narrow windows splayed on both faces.

The church of Rivolta d'Adda is a compound of San Babila at Milan and San Flaviano at Montefiascone, but nevertheless it marks a notable advance beyond them in the principles of construction and statics. From San Flaviano came the idea of ribbing the vaults, from San Babila that of giving them a raised and concave-crowned form, of which the earliest example that I know is afforded by the presbytery of San Vitale at Ravenna (526–547) (Fig. 336). From San Babila, too, it derived the system

of buttressing. But at Rivolta it was used to counterbalance the thrust of the wide vaulting of the nave with its great span, and discharge it on to the powerful buttresses of the aisle vaulting. And it was the adoption of cross vaulting that made it possible to light the nave directly, by inserting windows in the lunette wall spaces.

In short, the church reveals an understanding of the principles of thrust and abutment which will not be surpassed in later days by that of the Pointed style. But the Lombardic organism still required for its completion the construction of galleries

Fig. 336.—Ravenna. San Vitale. Upper part of presbytery (526–547).

above the aisles to counterbalance the thrust of the vaulting, and the direct lighting of the nave. We will now pass to the building which marks the last stage but one on the way towards the attainment of this goal.

THE BASILICA OF SANT' AMBROGIO AT MILAN.—Most of those who have written about this celebrated example of a vaulted basilica have indulged their fancy in guessing at its date as though they were playing a card in a game of chance. But architecture and the science of statics obey a law of progressive development. And so, we cannot investigate the date of a given architectural organism until we have first of all mastered the history of those which preceded, or were contemporary with, or followed it, in order to make sure that what is regarded as an original feature in such an organism may not turn out to be an original element in an organism of quite another type and period. Nor is it possible to fix within definite limits, even approximately, the age of a building, without a full knowledge

of that history, and without a series of dated monuments to guide us, which, like links in a chain, mark the fixed points in the gradual formation of the organism. That formation is a slow process, for it is not in the nature of a new style of architecture to come into the world, by an act of spontaneous generation, in all its beauty and completeness.

It is because these ways have remained untrodden—ways which are hard to traverse, though sure and leading to results of certainty, that we find ourselves in the presence of two schools of writers, at loggerheads with one another, and both of them with logic and with facts. The first puts the date of the nave and aisles of Sant' Ambrogio in the episcopate of Angilbert II (824–860), thus making a perfectly new system of construction and equilibrium come into existence all in a moment, at a date when the element from which it sprang, viz. the compound Lombardic support, consisting of piers combined with columns, had not yet seen the light. So that we are asked to accept a phenomenon belonging to the sphere of the miraculous: an organism, that is to say, which has reached almost its full development before it has passed through the embryonic stage, and then by some mysterious process dies away to rise again, like some new Phoenix from its own ashes, in the XIth century.

The Lombardic pier, the plan of which contains all the elements of the development in elevation of the building, appears in its elementary form, viz. a quadrangular block with a half-column attached to each side, only in the Xth century, as we saw in the case of the church of Montalino at Stradella. In its more developed form of two piers set cross-wise with four columns in the angles, it is seen at the opening of the next century in San Babila at Milan. These two types formed the models for every compound support used in Lombardic architecture and its derivatives.

The origin of this pier is not to be sought in the bundles of shafts used in remote times in Syria with the object of producing a multiplied impost, but rather from the Roman piers with engaged columns, and also from the cruciform examples with vaulting shafts engaged in the re-entrant angle, like those used in the Basilica Julia at Rome, and intended to provide the imposts for the longitudinal arches, the secondary transverse arches, and the springers of the vaulting; or, thirdly, from compound piers of the kind adopted for a portico near the Theatre of Marcellus also at Rome, illustrated in Fig. 115.

The second school, on the other hand, in spite of the recent revelation of the original church of Santa Maria e San Sigismondo at Rivolta d'Adda, and in the face of the ribbed vaulting in San Flaviano at Montefiascone and in the cathedral of Aversa, and though it has to travel (generally only on paper) to the North of France to find a type of vaulting in the XIIth century which was created in Italy a century before—this school, I say, would bring the Ambrosian Basilica down to a point well on in the XIIth century. It never seems to have struck them as inconceivable that the Lombard gilds could have built years before, in an unimportant place, a church such as that of Rivolta d'Adda, with an organic structure of so advanced a kind, and then have started to erect another of only a slightly more developed form in the most important centre of life in Lombardy. And that too, when the organism had already attained its completion in San Michele Maggiore at Pavia, marking the final stage in the way towards the perfection of the Lombardic system; so that they would make the architect of Sant' Ambrogio take a step backwards on the ascent which the development of that system forms.

But besides all this, a recently published document[1] proves, however much people may try to minimize its force, the circumstances and the date of the erection of Sant' Ambrogio as we see it. Having said so much, I proceed to give a summary of the information which has come down to us about the principal changes which the church has undergone.

The first basilica was raised in honour of Saints Gervasius and Protasius by St. Ambrose (374–397):—"... in basilicam quam ipse proprio aedificavit studio."

In 784 Archbishop Peter (784–805) handed it over to the charge of Benedictine monks, who in 789, with their first abbot Benedict (784–806), took up their residence in a convent built to receive them.

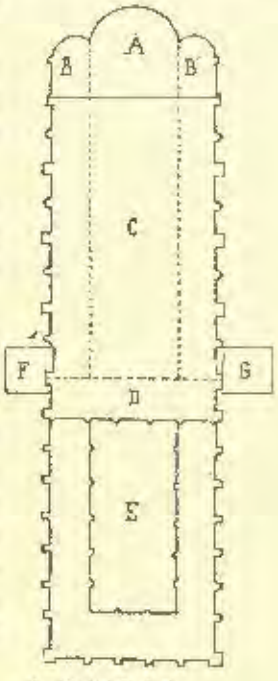
In 835 Archbishop Angilbert II (824–860) gave the monks the famous altar made by Wolvinius, after having provided them with a new abbot in the person of Gaudentius († 842), and restored the monastic discipline.

Archbishop Anspert of Biassono (869–882) carried out the works referred to in a line of his epitaph: "Atria vicinas struxit et ante fores."

Archbishop Anselm V of Pusterla (1126–1135) had a new campanile erected on the canons' side of the church, corresponding to the "Monks' Tower" on the other side, and gave it (in an unfinished state) to the former in 1128. It was built, at the expense of the city, by the same architect who had rebuilt the church: "... cum eiusdem ecclesie architectus ipsum (campanile) sicut aliam ecclesie fabricam de communi construxerit."

After being partially ruined in 1196 it was restored, and the cupola was rebuilt under Archbishops Hubert (1195–1196) and Philip (1196–1206).[2 3 4 5 6]

The story of these changes may be told more fully as follows (Figs. 337, 338, 339).



A—Choir (789–824).
BB—Apsidal chapels (824–860).
C—Body of the church (XIth Century).
D—Narthex (XIth Century).
E—Atrium (XIIth Century).
F—Canons' Tower (1126–1128).
G—Monks' Tower (789–824).

Fig. 337.—Milan. Plan of Sant' Ambrogio.

Between 789, when the monks were definitely installed in the basilica, and 824 when Angilbert II was consecrated as head of the Milanese Church, the rebuilding of the apse was taken in hand, and also the construction of the rectangular bay in front of it, an arrangement evidently due to the need felt by the monks, after their definite settlement in Sant' Ambrogio, of enlarging the space set apart for religious functions. Further, they built the campanile, which was appropriately christened the "Monks' Tower."

Next, in the episcopate of Angilbert, the two lateral apses were added (manifestly of later date than the previous work), and there was also carried out the rebuilding of the nave and aisles, and the reconstruction of the façade.

Later, Archbishop Anspert added the atrium, as is stated in his epitaph. This atrium, as designed, was open all round on both sides, at any rate in the front, but

[1] *Archivio storico lombardo*, 1904, 1905.—Biscaro, *Note e documenti Santambrosiani*.
[2] *Mon. Germ. hist.*—*Gregorii episcopi Turonensis liber in gloria martyrum*.
[3] Puricelli, *op. cit.* [4] Giulini, *op. cit.*
[5] *Archivio storico lombardo*, 1904, 1905.—Biscaro, *Note e documenti Santambrosiani*.

was closed soon afterwards, for the masonry of the arches and of the walls which block them up evidently belongs to about the same date.

Finally, in the last quarter of the XIth century, and before 1098, the year of the institution of the festival in honour of SS. Gervasius and Protasius on the occasion of the rediscovery of the bodies of the martyrs,[1] a discovery which must have taken place in the course of the rebuilding works, the conversion of the nave and aisles separated by columns into a nave and aisles covered with vaulting was carried out. But this was done without altering the original arrangement of the church, or

Fig. 338.—Milan. Sant' Ambrogio (XIth and XIIth Centuries).

touching the three apses and the frontal wall connected with them, and utilising to a considerable extent the old foundations. At the same time was built the narthex with the characteristic and striking loggia above it, but quite independent of any plan of an atrium in front of it.

This conversion was, in all probability, the result of the entrance of the popular element into the government of Milan. We know, as a matter of fact, that the people of Milan, which had obtained from Archbishop Aribert (1018–1045) the right

[1] *Archivio storico lombardo*, 1904, 1905.—Biscaro, *Note e documenti Santambrosiani*.

to bear arms, and with it the consciousness of its own power, achieved its triumph at the death of that proud prelate, when the government of the city took the form of a Commune. What wonder then if the people, remembering the steps taken by Angilbert and Anspert to affirm the archiepiscopal lordship, desired in its turn, now that those prerogatives were at an end, to assert in the most impressive form their own advent to power, their own supremacy?

In this transformation the Monks' Tower was left untouched, but now it was incorporated with the main building. The next step was to engraft, in the early years of the XIth century, the present atrium with its enclosing cloister on to the narthex. Lastly, between 1126 and 1128, the erection of the Canons' Tower was taken in hand,

Fig. 339.—Milan. Sant' Ambrogio. Atrium and façade (XIth and XIIth Centuries).

involving the partial demolition of the left side of the basilica. The tower in modern times has been raised in height, a fact which is patent to the observer.

The changes and enlargements here set forth find their confirmation in a number of considerations which I will briefly state.

It is unnecessary to discuss the Monks' Tower, as there can be no question about its date, or the three existing apses and the bays separated by walls in front of them (an arrangement which recalls that in the large basilica of St. Symphorosa on the Via Tiburtina near Rome), for we know that they date back to a period earlier than the body of the existing basilica, as may be seen in plans which have been published.[1] [2]

These plans make the remains of the columned nave and aisles go back to the time of St. Ambrose, whereas they only date from the episcopate of Angilbert II.

[1] Landriani, *op. cit.*

[2] Beltrami, *Ambrosiana—La basilica ambrosiana primitiva e la ricostruzione compiuta nel secolo IX.*

To begin with, where do we find churches erected before the end of the Xth century which show scroll work and figure capitals of the type of those in Sant' Ambrogio (Figs. 340, 341, 342)? It has not been my fortune to come across a single specimen. And therefore the nave and aisles of Sant' Ambrogio were not constructed before that period.

Fig. 340.—Milan. Sant' Ambrogio. Capital (XIth Century).

Where, too, before the second half of the XIth century, are we to look for basilicas in the Lombardic or derived styles, of ascertained date, with a complete system of raised cross vaulting for nave and aisles, wholly or partially ribbed? I am not in a position to adduce a single example either in Italy or in Normandy, in spite of the remarkable progress made by the Lombardic style in the latter country after the epoch of 1000.

Fig. 341.—Milan. Sant' Ambrogio. Capital (XIth Century).

Moreover, we must remember that, while the Lombardic basilicas of the early XIIth century, with their complete system of vaulting, *e.g.* San Michele Maggiore at Pavia, admitted windows not only in the side walls of the aisles and galleries above them, but also in the walls of the nave, and with this object had the imposts of the nave vaulting raised; the architect of the Ambrosian basilica, on the contrary, perhaps from a fear of imperilling the stability of his nave vaulting if the walls were raised sufficiently to allow of windows being made in them, was content to light the aisles and galleries with windows in their side walls, while he relied on those in the west front for lighting the nave.

Fig. 342.—Milan. Sant' Ambrogio. Capital (XIth Century).

The conclusion is that the conversion of the arcaded Sant' Ambrogio into a vaulted church was carried out before the XIIth century.

Added to all this is the evidence provided by the

principal door of the basilica (Fig. 343), which, although it has been tampered with, is still, as a whole, the work of Master Adam, who may with some reason be regarded as the architect of the existing basilica and of its new campanile. There are no grounds for making an exception even in the case of the jambs, which have been

Fig. 343.—Milan. Sant' Ambrogio. Portal (XIth Century).

thought to belong to the IXth century; whereas any trained eye will see at once the close relationship between the carving on the bottom piece of the right jamb and that on the two shafts on either side, which are unquestionably the work of Master Adam. Anyone, too, who is acquainted with the facts knows that the subject of Hercules

preparing to attack the Nemean lion, carved on the lowest piece of the left jamb (Fig. 344), was not treated by the Lombard mosaic workers and carvers before the XIth century. So that we shall not be far wrong if we say that, of the six pieces of marble which form the jambs, one is from the hand of Master Adam himself, and the others are the work of contemporary artists.

The date of the portal cannot be earlier than the second quarter of the XIth century. Anything else is contradicted by the bases with figure spurs. The oldest dated examples of these spurs belong only to the second quarter of that century, and we noticed them in San Flaviano at Montefiascone. On the other hand, it is

Fig. 344.—Milan. Sant' Ambrogio. Part of left jamb of the portal (XIth Century).

later than the first half of the XIth century, by reason of the carving on the shafts, the lintel, and the archivolts, which marks an obvious advance over that in San Flaviano at Montefiascone, especially in the treatment of animal life. At the same time it must be rather earlier than the portal of the cathedral at Modena, on account of the somewhat more advanced character of some of the carving on the latter. And it is decidedly older than the portals at Pavia belonging to San Michele Maggiore (erected just after the memorable earthquake of 1117) (Figs. 345, 346) and San Pietro in Ciel d'Oro (built after 1117) (Fig. 347), in which we find a fairly obvious advance, especially in the treatment of figures, over the carving in Sant' Ambrogio.

In short, the date which we arrive at agrees with that which may be gathered from the documentary evidence.[1] And that evidence authorizes us with good reason

[1] *Archivio storico lombardo*, 1904, 1905.—Biscaro, *Note e documenti Santambrosiani.*

in placing the erection of Sant' Ambrogio and the Canons' Tower within the possible limits of the forty years between 1088 and 1128. There fall into their proper places in this period: (1) the institution in 1098 of the festival in honour of SS. Gervasius and Protasius, when the basilica must have been finished; (2) the building of the atrium against the narthex, some years after 1098, as shown by the advanced art of the original carvings on the three sides which enclose it; and (3) the incorpora-

Fig. 345.—Pavia. Façade of San Michele Maggiore (XIIth Century).

tion of the Canons' Tower with the body of the basilica. And this period stands in the relation which we should expect to the date of the church at Rivolta d'Adda.

Everything points to the maker of the portal, "Adam Magister," being the architect of the basilica. The name Adam appears on the well-known inscription, with the date 1098, still to be seen on the outer front of the atrium of Sant' Ambrogio. It is also registered in a deed of purchase of a piece of land at Comabbio, executed at Milan in 1087, with the description as son of Albert "qui dicitur Melanense de loco Comabio." Thirdly, it occurs in the form of "Adam magister de Sancto Sepulcro" in the parish of Brebbia, in a second deed of purchase, dated 1094, of another piece of land, also in the territory of Comabbio.[1] Both

[1] *Archivio storico lombardo*, 1904, 1905.—Biscaro, *Note e documenti Santambrosiani*.

places, San Sepolcro and Comabbio, were the property of the monastery of Sant' Ambrogio.

In the portal of Sant' Ambrogio the animals rampant standing up against the shaft of a column should be noticed. At Rivolta d'Adda the motive had already been applied to another member, the capital. This motive of animals rampant, and sometimes "regardant," on the columns of portals, those at Sant' Ambrogio being the prototypes, was derived from Etruria. The sepulchral cippus from Settimello, now

Fig. 346.—Pavia. San Michele Maggiore. Portal at the side of the church (XIIth Century).

in the Archaeological Museum at Florence, and considered to belong to the second half of the VIth century B.C.,[1] has four rampant lions with their heads and fore feet turned outwards (Fig. 348).

This portal is the oldest surviving example of the kind which I can point to in Italy. The earlier one in Sant' Andrea at Montefiascone is not in its original state. North of the Alps we shall find the earliest specimen of a Lombardic portal, though

[1] Milani, *Cippo di Settimello—Atti della R. Accad. dei Lincei*, 1903.

not so characteristically Lombardic as that of Sant' Ambrogio, in St. Étienne at Caen (1066–1086), the work of Lanfranc of Pavia.

The creation of the doorway penetrating a wall with widely splayed sides and two orders of jamb shafts, surmounted by a lunette sunk in the middle of concentric archivolts and roll mouldings corresponding to the shafts, took place after the epoch of 1000, and was the work of the Lombard gilds. In the West it first appeared in buildings of which they were the authors, and in the East no building earlier than the XIIth century contains it at all.

Fig. 347.—Pavia. San Pietro in Ciel d' Oro. Portal (XIIth Century).

The basilica of Sant' Ambrogio is a combination of San Flaviano, with its galleries and unbroken roof, and of the church of Rivolta, with its raised cross vaulting for both nave and aisles, and system of buttresses. And though the architect secured the stability of the nave vaulting by keeping its spring rather low, and flanking it by the galleries, thereby sacrificing the direct lighting of the nave, still there is the fact, unparalleled at the time, of a nave at least 44 ft. wide, covered by cross vaulting in brick, sustained by arches of brick and stone.

Attention, too, must be called to the construction of the intersecting vaulting with diagonal ribs in the nave (the first two bays being in the main untouched), designed, like the masonry of the walls, to be visible, and not plastered over as at Rivolta d'Adda, Aversa, and Montefiascone. Here the vault cells, besides being made of straight courses of bricks, are no longer geometrically parts of one cylindrical

surface as in the past, but each cell shows internally a concave surface curved in every sense. A horizontal section taken at any point in the vaulting would show a quadrilateral figure with curvilinear sides. The curve of such vaulting is arbitrary, that is to say it rested with the constructor to carry it up just as high as he pleased from the spring. And the raised outline was not merely intended to resist pressure, but was partly chosen for its appearance.

The vaulting was constructed by first putting up temporary centres for diagonal and transverse arches, and building these in brick bound with stone, or entirely in stone. Next, on these permanent centres was formed a temporary rough boarded centring, with the surface modelled up in earth or in clay and water, to receive the cells. The slight raising forming the concave crown was obtained by an additional small centring. This concavity was intended, among other objects, to strengthen the vault in its weakest point. The vaulting of this kind in Sant' Ambrogio, showing as it does an advance beyond the other cases of ribbed vaults which we have discussed, is the earliest of its species in any building either in the West or in the East.

Fig. 348.—Florence. Archaeological Museum. Etruscan cippus from Settimello (VIth Century B.C.).

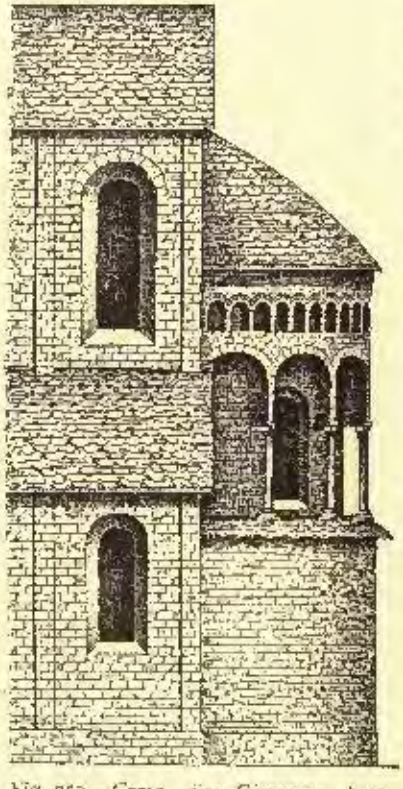


Fig. 350.—Como. San Giacomo. Apse (XIIth and XIIth Centuries).

And now we will conclude our argument with the examination of a peculiarity presented by the oldest part of Sant' Ambrogio, the apse, on the exterior of which we see high up a range of deeply recessed arched niches, divided into groups by lesenas. This treatment, which is another creation of the Lombard gilds, and apparently derived from the rectangular cavities grouped in threes by vertical rolls, as seen in San Pietro at Toscanella (739), is something quite new; for although long before the date of Sant' Ambrogio the central apse of St. Sophia at Salonica (about 495) exhibited small arched niches (provided that originally they were not openings intended to throw light on the mosaics of the interior), the motive has no direct connection with the arrangement shown in the apse of Sant' Ambrogio. Originally confined to apses, it was later applied to circular buildings and baptisteries, as may be seen, for instance, in the baptisteries of Agliate (824–860),

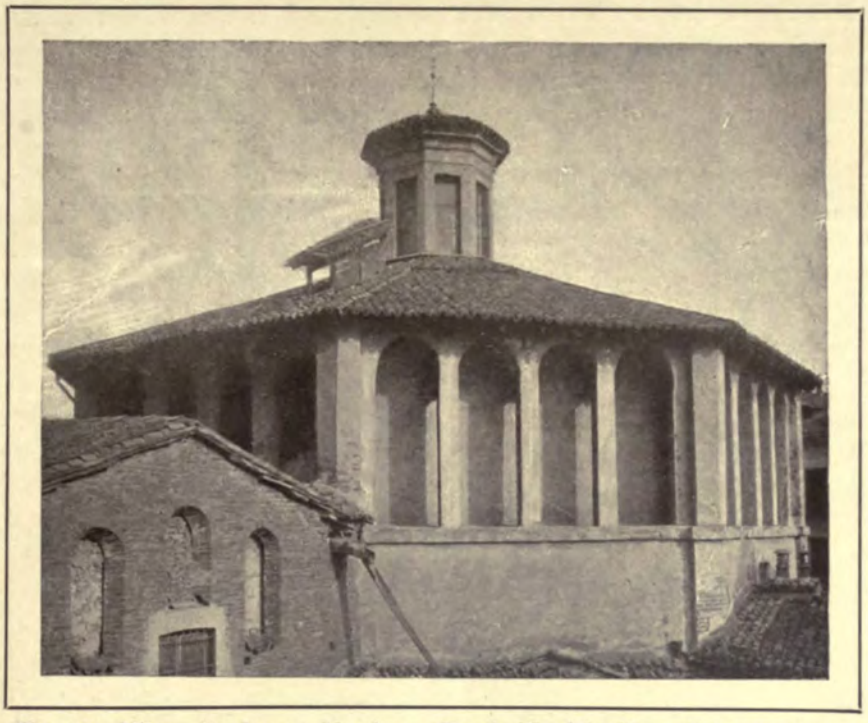


Fig. 349.—Milan. San Lorenzo Maggiore. Chapel of Sant' Aquilino. External gallery (XIth Century).

Fig. 351.—Modena. Duomo (1099–1106).

Biella (Xth century), and Novara (Xth century), and in the "Rotonda" at Brescia (XIth or XIIth century).

The next step was to convert them into external open galleries, the earliest known example of which is afforded by the chapel of Sant' Aquilino attached to San Lorenzo Maggiore at Milan (Fig. 349), where it does not belong, as some suppose, to the original structure of the chapel, but is an addition made after the fire of 1071, with the object of strengthening the cupola. The fact can easily be verified by anyone who compares the masonry of the original building with that of the more recent gallery. This type of gallery was afterwards embellished in the manner shown by San Giacomo at Como (Fig. 350). The date of this church comes between the last decade of the XIth century and the year 1117; in other words, before the ten years' war

Fig. 352.—Como. San Fedele. Apse (XIIth Century).

between Como and Milan.[1] It must be later than the erection of Sant' Abondio in the same town, for it is evidently some years younger, and derives some of its features from that church; but it cannot have been begun long before 1095, for if it had been finished by that year it would have been consecrated by Urban II like Sant' Abondio, which was not the case.

In their ennobled and elaborated form the galleries were employed with a new intention by the architect Lanfrancus, in the form of the wholly or partially communicating galleries encircling the cathedral of Modena (Fig. 351) which he designed and carried out (1099–1106).[2] The master builders of Pavia, again, applied them to the

[1] *Rivista arch. della provincia di Como*, fascicolo 30.—Barelli, *La chiesa di San Giacomo in Como.*

[2] Muratori, *Rerum Ital. script.*—*Translatio corporis s. Geminiani.*

fronts of churches, stepped so as to follow the slope of the gable. San Michele Maggiore at Pavia was the first to exhibit this treatment.

Being a Lombard creation, they spread rapidly in Italy through the agency of the Lombard gilds. Thus, for instance, they were used to encircle the exterior of the apses of San Frediano at Lucca (1112–1147),[1] Santa Maria Maggiore at Bergamo (begun in 1137, as is proved by the inscription in the south porch),[2] and San Fedele at Como (Fig. 352). The apse in the last case retains nothing of the structure of 914 (as others besides me have pointed out[3]), and after a careful examination I am inclined to place it in the XIIth century. External galleries were also carried round the cathedrals of Parma (XIIth century) (Fig. 353) and Piacenza, rebuilt in 1122[4] (as is confirmed by

Fig. 353.—Parma. Duomo (XIIth Century).

the inscription on the front) after the destruction of the old church by the earthquake of 1117. At Rome it made its first appearance in the apse of SS. Giovanni e Paolo, as part of the works of restoration and embellishment (1099–1216).[5] In the Venetian region a notable specimen is afforded by the church of SS. Maria e Donato at Murano (Fig. 354), which must have been restored after the earthquake of 1117,[6] and finished by 1140, as that date is inscribed in the beautiful mosaic pavement.

The introduction of open external galleries in the church at Murano, whereas the apse of St. Mark's at Venice (1071–1094) is merely decorated with plain blank

[1] Ridolfi, *Guida di Lucca.*
[2] Ronchetti, *Memorie storiche della città e chiesa di Bergamo.*
[3] Dehio und von Bezold, *op. cit.*
[4] Muratori, *Rerum Ital. script.—Chronicon Placentinum.*
[5] P. Germano di S. Stanislao, *op. cit.*
[6] *Mon. Germ. hist.—Annales Venetici breves.*

arcading, enables us to fix approximately the date of the apse of Santa Fosca at Torcello, where the arcades are still blank, but have been to some extent elaborated. The date, then, will come between the rebuilding of St. Mark's and that of San Donato, that is to say in the last years of the XIth century, or at latest in the first years of the XIIth.

The open galleries of the cathedral of Pisa (Fig. 355) might suggest that the Lombardo-Tuscan school anticipated the Lombardic in its application of this treatment, the church being identified with the one begun in 1063 and finished, according to Rohault de Fleury, in 1100.[1] Another writer[2] thinks that the building was for the most part complete in 1118, when it was consecrated by Pope Gelasius II (1118–1119). It is also stated[3] that in 1104 it was still some way off completion, inasmuch as between 1070 and 1185 the judges or kings of Cagliari, Gallura, and Arborea, and, several years after 1100, the Byzantine emperors, made important donations to the still unfinished work of Santa Maria. Further, that the structure itself is obviously lacking in unity, owing to the way in which the different parts meet in the middle; that the south side of the western limb shows a deviation to the extent of about 2 ft. 8 in. from the straight line, a circumstance which would support Rohault de Fleury's idea that at this point came the angle of the façade according to the original plan of a cross with equal arms; and that various similarities and differences betray some enlargement and alteration of the edifice. Moreover, that the Rainaldus of the inscription on the west front must be the master builder of the same name mentioned in a document of 1264 as at work on the cathedral; and that the platform round the building was made between 1298 and 1300. From all which it would appear that the imposing pile would seem to be the result of a general remodelling and enlargement of the original building of the XIth and XIIth centuries, carried out in the XIIIth.

Fig. 354.—Murano. Church of SS. Maria e Donato (XIIth Century).

The only comments I make are these. External open galleries made their first

[1] *Les monuments de Pise.*
[2] Supino, *Italia artistica—Pisa.*
[3] *Rassegna settimanale universale*, 1898.—Fontana, *Alcune osservazioni intorno al duomo di Pisa.*

appearance in Tuscany (I speak of cases where the date is known) in the apse of San Frediano at Lucca (1112–1147). They were lavishly used on the front of San Paolo a Ripa d'Arno at Pisa, recalling that of the Duomo, but not till after 1148, when Pope Eugenius III (1145–1150) consecrated the high altar.[1] To an experienced eye, acquainted with the subject, the cathedral of Pisa does not present an organic whole which came into existence at one time, designed to produce a preconceived effect of lines and masses, as the exterior of San Paolo just referred to does. On the contrary, it proclaims itself to be the result of alterations, and of a change in the decorative scheme. Then, the two ranges of external galleries round the apse are certainly not so old as the construction of 1063, for at that date the scheme was not yet invented. And the four tiers of galleries on the façade

Fig. 355.—Pisa. Duomo (XIth, XIIth, and XIIIth Centuries).

must be later than the building of the cathedral of Modena (1099–1106), for when the latter was erected the arches of the galleries of the façade were not independent but enclosed by relieving arches. They are also later than the rebuilding of the cathedrals of Piacenza and Parma, where the fronts are treated with one or two detached ranges of galleries and another stepped so as to follow the pitch of the gable.

And, lastly, of the three chief characteristics of the Pisan buildings—the banded facing, the blank arcades, and the open galleries—the first was imported from Syria; the second was derived from Ravenna and Lombardy, but given an improved form; and the third was borrowed from the Lombards with a greater scope for effect given to it by its use on façades.

North of the Alps the earliest specimens are to be seen in the cathedral at

[1] Jaffé, *Regesta pontificum Romanorum*.

Speyer, where they are a result of the alterations carried out from 1137 to 1146, and in that of Bonn belonging to the years from 1130 to 1169.

It now remains for us to glance at a building which in my belief marks the last stage on the way towards the completion of the Lombardic vaulted basilica.

THE CHURCH OF SAN MICHELE MAGGIORE AT PAVIA.—We are entirely without documentary evidence about its foundation and rebuilding. We are told[1] that the first church, erected in the days of Gothic or Byzantine rule, was in existence in 642, as is confirmed by Paulus Diaconus, and reached the XIth century without having suffered any important injury in the course of the devastations and conflagrations of which Pavia was the scene. Further, that it was rebuilt, either in consequence of some catastrophe, the details of which have not come down to us; or because, in the new era of prosperity inaugurated by the rise of the Commune, the people of Pavia wanted a new church more consistent with their ideals in the XIth century; or, thirdly, some time in the long period of silence which envelops the basilica after the year 1008 (when it is mentioned in a donation by Otto son of King Ardoin), and remains unbroken till the year 1155, when it was the scene of Barbarossa's coronation.

Fig. 356.—Pavia. San Michele Maggiore. South side (XIIth Century).

My view is that the existing structure arose directly after the terrible earthquake of 1117, recorded by Muratori,[2] which must have brought on Pavia a catastrophe similar to those which ruined Verona, Vicenza, Parma, Cremona, and other Italian towns. This much is certain, that other ancient churches in Pavia were rebuilt, such as San Teodoro, San Giovanni in Borgo (now destroyed, with a façade which combined the features of San Michele Maggiore and those of San Pietro in Ciel d'Oro), and also the double cathedral, the date of which is placed by De Dartein,[3] for Santo Stefano in the XIth or XIIth century, and for Santa Maria del Popolo in the XIIth, though what is left of the two churches shows traces only of the XIIth century.

San Michele is really later than the church of Rivolta d'Adda and Sant'

[1] *Atti della R. Accademia dei Lincei*, anni 1895–1896.—Merkel, *L'epitaffio di Ennodio e la basilica di San Michele Maggiore in Pavia.*

[2] *Annali d'Italia.*

[3] *Op. cit.*

Ambrogio at Milan, because we not only find it exhibiting a more perfect organism, but also because it shows in its carvings, taking into account the material

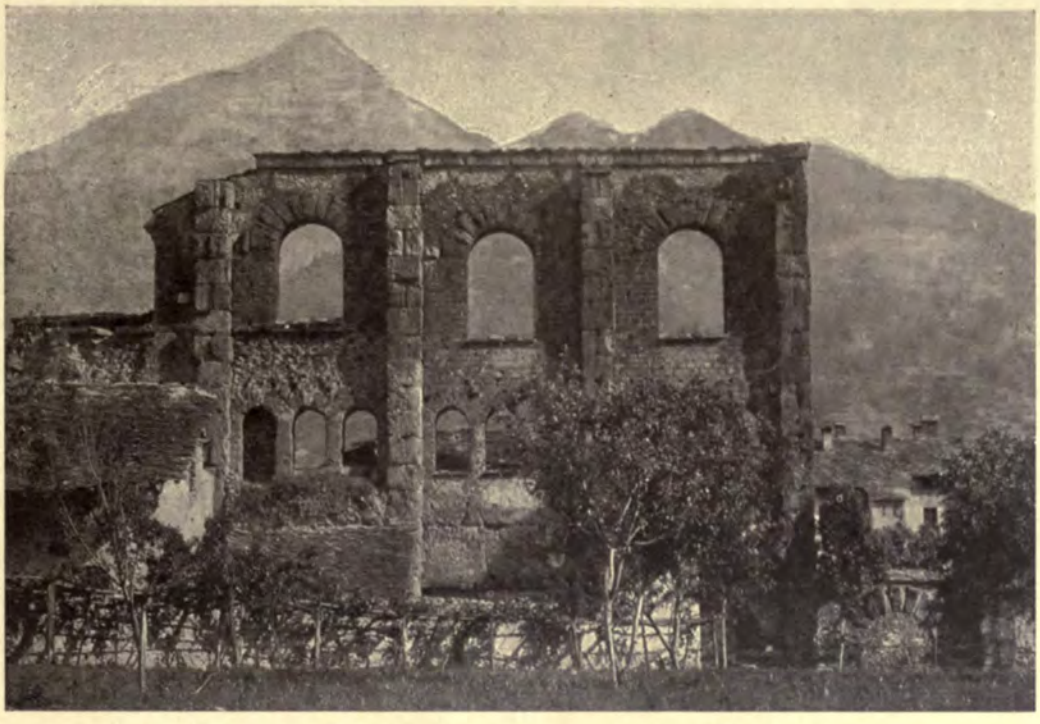


Fig. 357.—Aosta. Remains of the Roman Theatre (about 25 B.C.).

used, a remarkable artistic progress compared with those of the two other churches, especially in the figure subjects, which also display a fairly obvious improvement over those of the cathedral at Modena (1099–1106). On the other hand, it is some years earlier than San Pietro in Ciel d'Oro. If proof be needed one has only

Fig. 358.—Plan of Roman building. (*From San Gallo's sketch book in the Vatican Library.*)

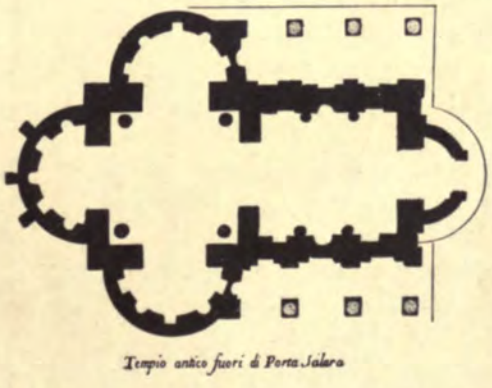


Fig. 359.—Rome. Plan of tomb outside the Porta Salaria. (*From Montano, "Li cinque libri d'architettura."*)

to compare the archangel over the portal of the latter with the similar figures on the doorways of San Michele; or, again, the figure subjects on the capitals in the two churches.

The old restorations and reconstructions in brickwork to be seen on the exterior of San Michele (Fig. 356) date from 1489, when the structure threatened "maximam ruynam in corpore et voltis tam de medio quam a lateribus ipsius ecclesie";[1] and the danger was so immediate that the urgent work of renewal and restoration had been already taken in hand. It was carried out by Master "Augustinus de Candia filius quondam M. Jacobi," as stated in a document of October 3rd, 1489. I note here that this Master James, with his brother, put up in 1487 the present vaulted roof over the central part of San Pietro in Ciel d'Oro (reconsecrated in 1132), as is proved by an inscription preserved by Bossi in his manuscript collection of Pavian inscriptions now belonging to the University of Pavia. This roof replaced an older one.[2]

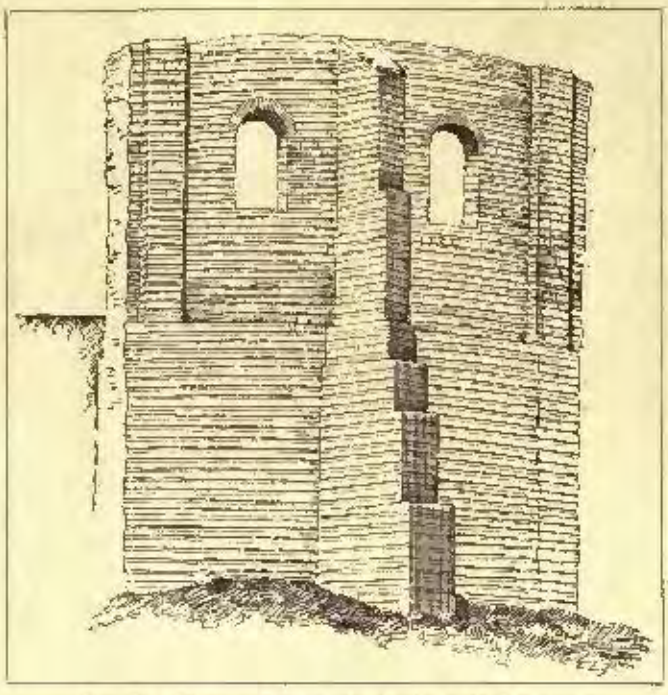


Fig. 360.—Rome. Portion of enclosing wall of cemetery near Sant' Agnese outside the walls (625–638).

From these documents and others preserved in the Museo Civico it appears that the vaulting of the nave in San Michele was rebuilt, and that of the aisles restored and put in order; that work was done on the buttresses, the upper part of the walls of the body of the church, the cupola, the presbytery, and the apse; while the barrel vaults of the transept were secured with iron tie rods. A visit to the space between the vaulting and the roof enables one to estimate without difficulty the amount of reconstruction and alterations which took place at the close of the XVth century (in which brick was used), and what was

Fig. 361.—Rome. Villa called "Sette Bassi." Ribbed vaulting (IInd Century).

[1] Museo Civico, Pavia. Petition (supplica) of Hieronimus Varixius de Roxate, provost of the church, transcribed for me by Mgr. R. Majocchi, Rector of the Collegio Borromeo, Pavia.

[2] Majocchi e Casacca, *op. cit.*

the original state of the building. Thus, one may still see the wall-arches of the vaulting which contained the original windows of the nave, double-splayed like those still remaining below in the aisles and triforium. There, again, are the vaulting shafts, and one can trace the alterations made in the external blank arcades, as well as the rebuilding of the upper part of the dome and of part of the transept at its highest point.

Fig. 362.—Rome. Villa called "Sette Bassi." Ribbed vaulting (IInd Century).

In its original plan San Michele, which forms a perfect cross with very elongated arms, and is divided into nave and aisles (the former being over 33 feet wide) by piers alternately larger and smaller, had its nave, aisles, and galleries covered with raised cross vaulting in square bays; barrel vaults for the arms of the cross and the spacious presbytery; a half-dome for the apse; and an octagonal cupola resting on Lombardic compound pendentives over the crossing. This cupola is the earliest specimen of a Lombardic dome of considerable size, in its completed and elaborated form, existing either in Italy or in the countries north of the Alps.

* * *

We are not to imagine that the credit of inventing the essential elements of the Lombardic organism, taken individually, belongs to the Lombard and Comacine Masters. As a matter of fact:

(1) The Babylonians were acquainted with buttresses, as is shown by the remains of the well-known temple at Mugheir, where the face of the walls is broken from point to point by the buttresses which give it support. The Romans afterwards developed them on statical principles (Figs. 357, 358, 359), placing them in relation to the vaulting and the arches in the interior. They also sometimes disposed them simply between the openings of arches and windows. The builders of Rome and Ravenna and their immediate Italian descendants shaped them in different ways: as broad pilasters, continuous, graduated or stepped (Fig. 360); and as

Fig. 363.—Rome. Villa called "Sette Bassi." Detail of ribbed vaulting (IInd Century).

Fig. 364.—Constantinople. Convent church of Myrelaion (919–945).

a rectangular or ramping wall pierced by an arch.

(2) In the case of compound piers formed to support several arches, and also of cruciform piers used as the starting point of longitudinal and transverse arches and groins of vaulting, the Romans were the first to employ them.

(3) Raised concave-crowned cross vaulting had been used by the Ravennate builders of the VIth century in San Vitale.

(4) Diagonal ribs were an invention of the Roman builders, who used them in their intersecting vaulting, not merely incorporated with the masonry, as has been universally believed, but also standing out and visible, as I have discovered. Ribs of this kind, viz. visible and at the same time incorporated with the vaulting, may still be seen in the substructures of the villa known as "Sette Bassi," where one room of about 25 feet square, belonging to the reign of Hadrian as shown by the brick stamps, is covered by an intersecting vault, the cells of which rest on prominent massive diagonal ribs of rectangular section (Figs. 361, 362). These ribs are made of compartments in brickwork filled in with rubble (Fig. 363) and die away at the angles into a triangular point. They gradually increase in breadth till at the point of intersection they measure about 2 ft. 4 in. across. The cells are formed of a layer of tufa lumps set by hand, with the concrete backing above it. Both cells and ribs were originally plastered.

The Lombard gilds, however, deserve the credit of having given to almost all these elements new forms, new functions,

Fig. 365.—Constantinople. Convent church of Myrelaion (919-945).

new uses; and of having combined them in a system providing both for the equilibrium and the decorative effect of the building, different from the preceding systems, and absolutely original. And in this way they not only initiated what Viollet-le-Duc[1] calls one of the most complete and logical revolutions with which we are acquainted in the domain of architecture, but they also created a rich and varied scheme of decoration which might have been made on purpose to prove that the most effective method of expression in architecture is to be found in a frank and intelligent revelation of the structure.

The Lombardic organism had no predecessors in the Western world. And this is equally true of the East. In the four centuries before the epoch of 1000, the vaulted churches built by the Greeks were more or less modelled, at first on the old Byzantine type of the age of Justinian, and afterwards on that type combined with the fashions prevailing under Leo III the Isaurian (717–740) and Constantine V Copronymus (740–775).

Fig. 366.—Salonica. Church of the Virgin (1028).

The well-preserved church of the Convent of Myrelaion at Constantinople (919–945) (Figs. 364, 365), which affords a very rare example in the East of external buttresses placed in relation to the piers of the nave and cupola, tells us what was the constructive scheme employed by the Greeks at the time when the Lombardic system was being evolved in Italy. And when that system came forth into the light of day, the Byzantine builders still held fast to the models we have described, though they introduced a new scheme of architectural decoration for the exterior of their buildings and modified the external form of their domes, the drum of which, under the potent influence of the Lombardic School, became polygonal, while the cupola, by an original treatment, had its continuous spherical surface broken into convex sections corresponding to the curved spaces below. The prototype of this last Byzantine form is the church of the Virgin at Salonica (Fig. 366) built by Christopher, "protospatharius" and "katepan" (or chieftain) of Langobardia, together with his wife and their sons (1028), as is stated in the well-known inscription. This building, I consider, is important for the history of ecclesiastical architecture in the East; for, with its characteristics as guide, it would not be difficult for one who was at home in the subject to classify chronologically (approximately it may be) a number of

[1] *Dictionnaire raisonné de l'architecture française du XIe au XVIe siècle.*

similar churches in those countries, which are not dated, but have sometimes been assigned to wildly imaginary periods.

* * *

Here ends the first part of this book. In the second and last part we shall cross the Alps, and with the aid of historical proofs and of the buildings themselves we shall see what is the truth about the origin of the styles of architecture derived from the Lombardic, which flourished there in the XIth and XIIth centuries.

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